

Implementing SAP Courses into the International Business Degree Programme



Bachelor's thesis

Degree Programme in International Business

Valkeakoski, 1 March 2011

Jing Xu

Degree Programme in International Business
Valkeakoski

Title Implementing SAP Courses into the International Business
Programme

Author Jing Xu

Supervised by Dawn Aarnio

Approved on _____.____.20____

Approved by

Valkeakoski
Degree Programme in International Business
International Management

Author	Jing Xu	Year 2011
Subject of Bachelor's thesis	Implementing SAP Courses into the International Business Programme	

ABSTRACT

This study was commissioned by HAMK University of Applied Science, International Business in Valkeakoski Union. There is a need to develop the current situation of implementing ERP/ SAP System into the curriculum. The current curriculum of International Business Programme has already included the "Introduction of ERP systems"; "Human Resource Management and ERP", thus some other practices of operating SAP R/3 System in regard to other business courses. However, it doesn't really seem to be a clearly defined system or study module since already two years. Since the author of the present thesis has experience studying for a double degree in Controlling and Information Management Programme in Hochschule Ludwigshafen in Germany which has successfully run SAP R/3 within their curriculum for many years, it would be a great contribution to design a study module for International Business Programme of her home university HAMK University of Applied Science.

The aim of the paper is to study how to implement the SAP courses into HAMK University of Applied Science of Business curriculum, what topics, elements, modules and inter-system business processes should be used to support the theory. In order to do this, there are some objectives need to take into consider. To find out the importance of SAP, the demand, experiences, options of SAP for the graduates; thus to catch the demand of the global market.

To get information from different aspects, the author would have three interviews and two email interviews because of distance. The interview group is divided into three parts. The participants are respectively professor from University in Germany, lecturers from HAMK in Finland and students from HAMK who did or is doing a double degree in Germany. The purpose is to analyse the curriculum of IB programme of HAMK, and design a module based on the purpose of the studies; sum up with recommendations of incorporating.

Keywords ERP Systems, business curriculum, SAP R/3, module design, HAMK

Pages 43 p. + appendices 3 p.

CONTENTS

1	INTRODUCTION	7
1.1	The aim of the thesis	7
1.2	The objective of the thesis.....	7
1.3	Research Methods	8
1.4	The structure of the thesis	8
2	ERP SYSTEMS IN THE CLASSROOM	9
3	SAP.....	12
3.1	Description of SAP as a company.....	12
3.2	Why SAP is a Market Leader in ERP Systems.....	13
3.3	Application Modules of SAP	13
3.4	What SAP can be used for	17
3.4.1	Business Intelligence	17
3.4.2	Customer Relationship Management	17
3.4.3	Enterprise Information Management.....	17
3.4.4	Enterprise Performance Management	17
3.4.5	Enterprise Resource Planning.....	18
3.4.6	Management and Compliance	18
3.4.7	Human Resource Management.....	18
3.4.8	Manufacturing	18
3.4.9	Mobile Business Solution.....	18
3.4.10	Product Lifecycle Management.....	19
3.4.11	Service and Asset Management.....	19
3.4.12	Supply Chain Management	19
3.4.13	Supplier Relationship Management	19
4	PARTNERSHIPS WITH EDUCATIONAL INSTITUTIONS.....	20
4.1	SAP University Alliances	20
4.2	The necessity to give lectures in universities.....	20
5	COURSE DESIGN AND DEVELOPMENT	23
5.1	ISD – Instructional Systems Development	23
5.2	ADDIE Model.....	23
6	INTERVIEWS.....	26
6.1	An interview with Professor Joachim Buch from Hochschule Ludwigshafen	26
6.2	Interviews of schoolmates	27
6.2.1	Interview with Larissa Sousa.....	27
6.2.2	Interview with Yuxuan Zhan.....	28
6.3	E-mail interviews with Lecturers from IB Programme HAMK, Finland	29
6.3.1	E-mail Interview with Lecturer Dawn Aarnio from HAMK.....	30
6.3.2	Email Interview with Lecture Annaleena Kolehmainen	30
7	INCORPORATION INTO IB PROGRAMME	32

7.1	Demand and Possibilities of HAMK to Implement SAP courses.....	32
7.2	Bachelor of IB Programme in HAMK.....	32
7.2.1	History of HAMK.....	32
7.2.2	IB Programme in Valkeakosi, HAMK.....	33
7.2.3	The curriculum of degree programme of IB of 2011	34
7.3	Analyzing of the Curriculum	36
7.3.1	Major Subject – 30057405 International Management	37
7.3.2	Major Subject – 30057321/30057679 Global Marketing.....	37
7.4	An Introduction of Business Process Management Module Implementation...	38
7.4.1	BPM - Business Process Management	39
7.4.2	Content of BPM Module	41
7.4.3	The reason to choose SAP FI/CO.....	43
7.5	Implementation of BPM Module	45
7.5.1	Recommendation 1 - Optional Study	45
7.5.2	Recommendation 2 - Major Study	45
8	CONCLUSION	49
	SOURCES (LIST OF REFERENCE).....	50

APPENDIX 1	Cover Letter for an interview to Prof. Dr. Joachim Buch from Hochschule Ludwigshafen in Germany
APPENDIX 2	Cover Letter for interviews to double degree schoolmates
APPENDIX 3	Email Interviews to lecturer Dawn Aarnio and Annaleena Kolehmainen from HAMK University of Applied Science in Finland
APPENDIX 4	Email Interview answer from lecturer Dawn Aarnio in HAMK
APPENDIX 5	Email Interview answer from lecturer Annaleena Kolehmainen from HAMK

Abbreviations

AG	Aktiengesellschaft (similar to Limited Liability Company)
AM	Asset Management
BW	Business Information Warehouse
CA	Cross-Application
CO	Controlling
CRM	Customer Relationship Management
DM	Demand Management
ERP	Enterprise Resource Planning
e.g.	for example
etc.	et cetera
FI	Financial Accounting
HR	Human Resource
IB	International Business
IDES	Internet Demonstration and Evaluation System
Inc.	Incorporated
IS	Industry Solutions
MM	Material Management
MPS	Master Planning Scheduling
MRP	Material Requirement Planning
PI	Process Integration
PLM	Product Lifecycle Management
PM	Plant Maintenance
PP	Production Planning
PS	Project System
QM	Quality Management
SAP	Systems Applications and Products in Data Processing; (Systems, Applications and Products)
SAP GRC	SAP Governance, Risk and Compliance
SAP GUI	SAP Graphical User Interface
SCM	Supply Chain Management
SD	Sales and Distribution
SOP	Sales Operation Planning
SRM	Supplier Relationship Management
WF	Workflow

1 INTRODUCTION

It has been a while that ERPs – Enterprise Resource Planning Systems, have received lots of attentions in the trade literature, which includes positive and negative, critical and tolerant words. “This is an academic environment, not a trade school”. (Corbitt G. & Mensching J. 2000) This reference is a translation of the argument that appears in academic environments when “products” are presented into the curriculum.

Nevertheless, “This is not surprising since AMR Research Inc. (was an independent research firm, sold to *Gartner Research* in 2009) Reports that over half of the software revenue for licenses, and maintenance come from the ERP world market. In Europe, this figure is 64% (AMR Research Inc. 1998).” (Corbitt G. & Mensching J. 2000) To consider of this presence; it is not a surprise that some faculty in colleges and universities are looking for different ways to expose students to the ERP trend or ‘wave’, or at least to make students aware of what these software products can do.

Therefore, HAMK University of Applied Science comes up also with the idea of implementing SAP courses into their International Business Programme. Here the author will design a module of international management studies, which is related to ERP system SAP for IB programme for HAMK.

1.1 The aim of the thesis

The author did a double degree study in Hochschule Ludwigshafen in Germany, which offers SAP courses in their “Controlling and Information Management” study programme. It has been successfully running for many years. Therefore, the author found the topic of the present thesis. The aim of the paper is to study how to implement the ERP system SAP courses into the Business curriculum of HAMK University of Applied Science; what topics is and what elements, modules and inter-system business processes should be used to support the theory.

1.2 The objective of the thesis

In this paper, the author is going to introduce ERP systems, ERP systems in the classroom, SAP R/3, what is the importance of SAP? Finding out the demand, experiences, and options of SAP of the graduates is also one of the objectives. Therefore, they would be able to catch the demand of the global market. This would be based on different literatures from books, magazines and articles. Moreover, online research and interviews are also going to be taken into consideration. The other part of the study would analyse the curriculum of IB programme in HAMK, and design a module based on the purpose of the studies; sum up with suggestions and recommendations of incorporating.

1.3 Research Methods

This study is based on both desk research and field research. The theoretical knowledge presented in this study is based on literature from books, articles and magazines. However, it was difficult to find English books which are related to SAP in the university in Germany. Most of the books are written in German. In total, the author has found only six books written in the English language which are about information systems, ERP systems, and SAP Functions. The contents of these books could not reach the demand of the author in order to complete her thesis. As a result, the author chose some other options.

Internet resource plays a big role for both theory and research part of this study; such as, SAP official website. As everybody knows that internet is becoming more and more important for our daily life, it is the biggest multimedia channel. People are updating their thoughts and opinions in the internet, what is more, much data can be found from the online database such as Springer Link www.springer.com. These sources are up-to-date and just right for the purpose.

In addition, to support the theories, interviews to different target groups are used as well.

1.4 The structure of the thesis

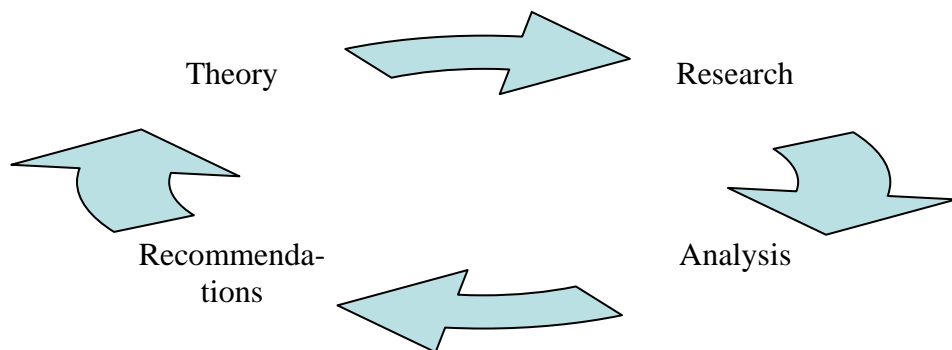


FIGURE 1 *Structure of the thesis*

2 ERP SYSTEMS IN THE CLASSROOM

Traditionally, curriculums of business schools have been organized around the concept of functional areas. To describe a student's concentration of courses in one of the functional areas, we are using major, option, emphasis as the words. On the other hand, nowadays, in order to face today's business, universities accrediting agency, ask for a certain amount of business classes in each of the different functional areas in addition to understand the global issues. (Corbitt G. & Mensching J. 2000)

The majority of Business Colleges or Universities which offer Business Studies require the students to take individual courses in Accounting, Marketing, Management, Finance, Human Resource, Information Systems, etc. When students want to learn some more depth in a specific area because of personal interests or job placement purposes, school asks students to take a common body of knowledge in a variety of functional areas. It leads to a lack of understanding how the business operates internally. For example, how marketing and accounting relate to each other are lost to most undergraduates. With the current business environment, the view of business by universities is in sharp contrast. Cross-functional interactions, teamwork, value chains, business processes, workflow management and supply chains are tightly connected with each other in nowadays businesses. All of these concepts call for students to put their attention not only on a specific functional area or a narrow subject. Instead, they must have an understanding of how that functional area relates to each other and relates to the rest of the business. (Corbitt G. & Mensching J. 2000)

It has been a major challenge to integrate ERP systems into the curriculum of both universities and all kinds of institutions of higher education for over nearly fifteen years. The tremendous complexity of ERP systems carries a significant challenge for a bit amount of institutions. It took a while until 1997 that a wider integration of ERP systems in the curriculum of business, information technology/systems and engineering schools could be observed worldwide. (Roseman M. 2004)

ERP systems education is an area which requires particular attention for some reasons. A great many of students have a strong interest in this subject, and they hope that they could gain market-driven skills by studying this subject. When this frequently ensures high attendance, students' perceptions and expectations have to be managed carefully, because it is not the objective of such initiative strictly to enhance students' skills via training activities. Handling ERP systems is typically large and complex. The frequency of upgrades and innovations from one software discharge to the next represent the quickly evolving nature of those Information Systems solutions. In general, it is frequently difficult for the lecture to stay abreast of these changes to business exercises, not to designate to investigate, search and educate. By the time current teaching material of persuading quality are available, there are new system upgrades and innovation cycles to address. (Roseman M. 2004)

As the information which we could get from news and articles, most of the market-leading enterprise systems' vendors established University Alliances with regional relationship managers. The alliance programmes have active curriculum innovations mostly under a certain subject at both undergraduate and postgraduate levels, such as Information Systems. A lot of academics contributed to the area of ERP systems education with case studies which means learning by doing. First of all, it is necessary to have willingness to gain insight into the rich system functionality. Secondly, material appropriate and hands-on experiences for tertiary education are still a bottleneck. "However, the successful uptake of reliable application hosting solutions seems to relieve at least the pressure related to the technical system support. The data knowledge exchange will be the next 'wave', which could be observed in this market." (Roseman M. 2004)

To sum up, the key success factor for learning SAP solutions for the students is to consider obtaining practical experience, good learning approaches, helpful textbooks or materials, good instructors or supervisors and promising job prospect. In a word, the ERP system provides a unique opportunity to learn the concepts through process analysis. In a perfect case, when ERP is implemented and integrated across courses, it would come up that students can easily and very well have an understanding of visualizing the business process view of enterprise; improving value-added process; identity and eliminating non-value-added activities. (Podlogar M. 2006)

There are definitely many benefits of incorporating ERP systems into a curriculum or to bring ERP systems into the classroom. For example, to make students get to know the important concepts of ERP systems and their business process focus. "ERP systems enable today's enterprises to transform themselves from a functional orientation towards a business process orientation." (Podlogar M. 2006) Thus, one of the main reasons for introducing ERP system into curriculum is to bring students to the way of the business process, plus extend across the enterprise and the enterprise's information value chain. For today's graduates, it is necessary to gain first of all, a wider understanding of the strategic goals of an enterprise; second, the business processes which support these goals. They should be aware of the problems which enterprises experience just like if they are charged with a major ERP system implementation and how they can minimize the threats to successful projects as a business or systems professional. IDES refers to "Internet Demonstration and Evaluation System"; it represents a model company in SAP R/3 System. Students can interact with the vendor-provided database (IDES in SAP is such system) that serves as a hypothetical company, they can see in the first place how complex and truly integrate these systems are. (Grey D. & McCann K. D. 2009)

Incorporating ERP into higher education leads students to better identify with the real business world, as they transfer academic principles and concepts from the classroom into real-life business practices and complexities. On condition that universities are aware of challenges and

bear a considerate and straight forwarded approach to ERP publication within their schools can the benefits begin to accrue? All of a sudden and over all, there seems to be an eagerness on the part of academia to comprise this technology. (Bradford M., Vijayaraman B. S. & Chandra, A. 2003 437 – 456)

3 SAP

SAP result from Systems Applications and Products in Data Processing. It is not only the name of the company, but also the name of the products of enterprise softwares. SAP is the worldwide leading Enterprise Information and Management Package. Use of this package makes it possible to track and manage, in real-time, sales, production, finance accounting and human resources in an enterprise.

SAP (which represents Systems, Applications, and Products), is a world-wide database system that was created more than 30 years ago by a group of IBM staff in Germany. The system has made well-known not solely for its usefulness, but because it is so general that not a single somebody entirely can appear to describe or use the system effectively. In short, the system allows organizations to use one database to run all of the programmes and software applications they use inside their business on a day-to-day basis.

3.1 Description of SAP as a company

SAP AG was founded in June 1972 in Walldorf, Germany. It employs over 35,000 people worldwide. Five former IBM engineers in Mannheim Baden-Württemberg (Dietmer Hopp, Hans-Werner Hector, Hasso Plattner, Klaus Tschira and Claus Wellenreuther) founded the company as *Systemanalyse und Programmentwicklung* – System Analysis and Program Development. The acronym was later changed to stand for *Systeme, Anwendungen und Produkte in der Datenverarbeitung* – Systems, Applications and Products in Data Processing.

SAP leads the client/server software market worldwide and is the fifth largest independent software company with over 17,500 customers including more than half of the world's 500 top companies. (Bancroft H. N., Seip H. & Sprengel A. 1998) SAP is the world's top-ranked ERP software. It represents the most advanced management ideas, the best software design. SAP focuses on six industry sectors which include process industries, discrete industries, consumer industries, service industries, financial service and public service. (SAP AG 2011) They offer more than 25 industry solution portfolios for large enterprises and more than 550 micro-vertical solutions for medium size companies and small businesses. (SAP AG 2011) Among all the top five hundred companies of the world, more than 80 percent of the companies using SAP. They complete products of front, covering a variety of solutions from large, medium to small scale enterprises. They are: (SAP AG 2011)

1. SAP Large Enterprise Solutions: SAP Business Suite (ERP, CRM, SRM, SCM, PLM)
2. SAP Medium Business Solutions: SAP Business All-in-One
3. SAP Hosted ERP Solution: SAP Business By Design
4. SAP Small Business Solutions: SAP Business One

5. SAP System application programme
6. ERP (Enterprise Resource Planning)
7. MRP (Material Requirement Planning)
8. PP (Production Planning)
9. SOP (Sales Operation Planning)
10. DM (Demand Management)
11. MPS (Master Planning Scheduling)

3.2 Why SAP is a Market Leader in ERP Systems

“What makes SAP different? Traditional computer information systems used by many businesses today have been developed to accomplish some specific tasks and provide reports and analysis of events that have already taken place.”(Management Information Systems 2008) An example would be accounting general ledger systems. Occasionally, some systems operate in a “real-time” mode. Therefore they have up-to-date information in the system and that information can be used to actually control events. A canonical company normally has many separate systems. It is not difficult to have a general idea those systems work together to manage different processes such as purchase, production, sales and accounting. Each of these systems has its own data bases; it is happening seldom passing information to other systems in a timely manner. (Management Information Systems 2008)

SAP takes a different passageway. Only one information system in an enterprise exists. All applications have access to the same data and real events in the business launch transactions. Cite an instance; accounting is done automatically in sales and production parts; from sales, it is possible to see when the products can be delivered; production schedules are driven by sales. “The whole system is designed to be real-time and not historical.” (Management Information Systems 2008)

The SAP structure comprises those that are considered as the “best business practices”. (Management Information Systems 2008) Companies implementing SAP adapt its operations to it to achieve its efficiencies. Business Process Re-engineering is involved in the process of adapting procedures to the SAP model. It is a logical analysis of the events and relationships that exist in an enterprise’s operations. (Management Information Systems 2008)

3.3 Application Modules of SAP

SAP R/3 architecture consists of three main software layers – SAP GUI (presentation layer); SAP applications; SAP database. They “can be distributed to physically separate computers which are then connected through a network in order to make the SAP software function as a whole”. (Bancroft H. N., Seip H. & Sprengel A. 1998) According to the source

from the book – *Common SAP R/3 Functions*, the author made a figure to show the SAP software architecture. (Bancroft H. N., Seip H. & Sprengel A. 1998) Figure 2 provides an overview of this architecture:

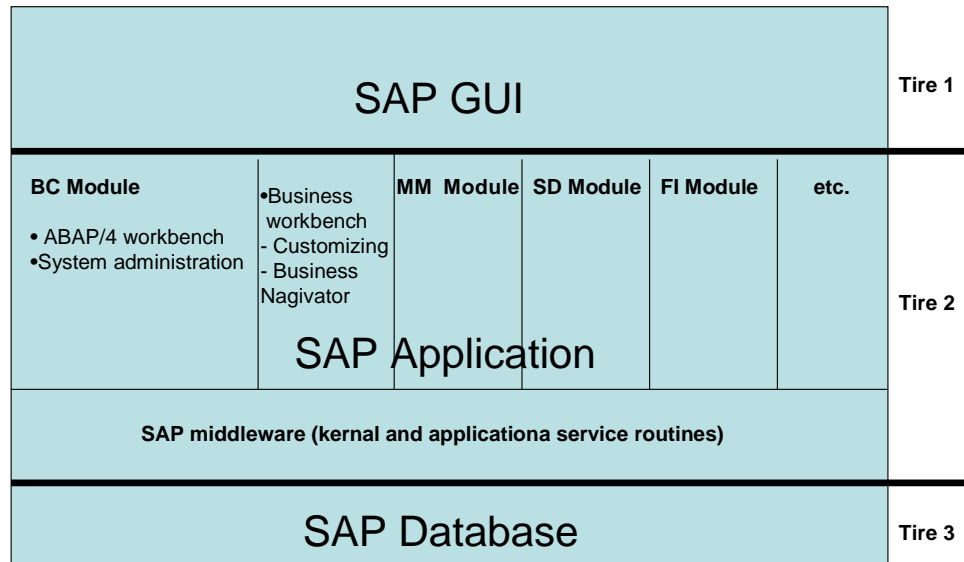


FIGURE 2 The SAP software architecture

Additional figure 3 presents the application modules of SAP R/3. It is also a good picture to represent a business process.

R/3 Core Business Process

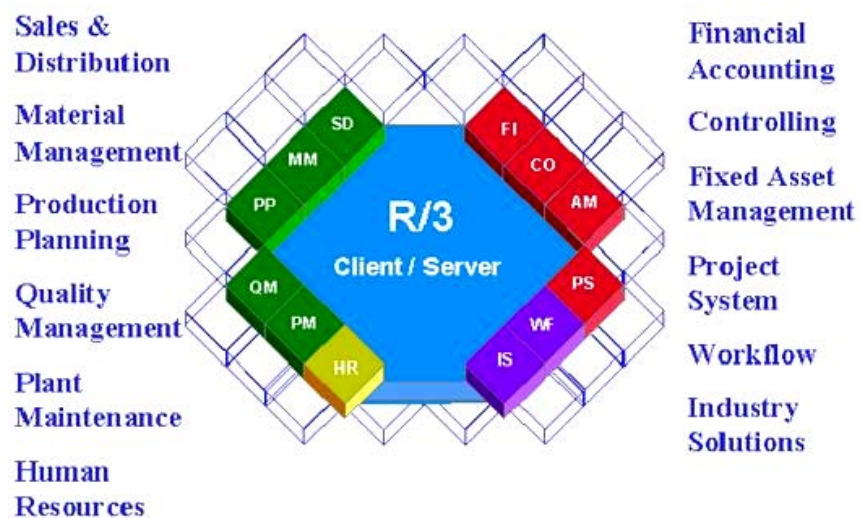


FIGURE 3 R/3 Core Business Process; Applications Modules of SAP R/3

All information and sources shows SAP has several layers. The basic system (SAP BASIS) is the heart of the data operations. It should not be evident to higher level or managerial users. Other customizing and implementation tools exist also. From a manager's point of view, the core of the system is the application modules. In a typical company, these modules may not all be implemented but they are all related. People might ask who provides the development and runtime environment for SAP applications; it is SAP Net Weaver. It is the integrated technology computing platform of SAP and the technical foundation for many SAP applications. SAP Net Weaver is built not only using primarily the ABAP programming language, but also C, (programming language) C++ and Java EE. It also employs open standards and industry de facto standards and can be extended and interoperate with technologies such as Microsoft.NET, Java EE, and IBM Web Sphere. (Bancroft H. N., Seip H. & Sprengel A. 1998) To divert our attention, the application modules are listed below: (McCann K. D. & Grey D. 2009)

1. **FI Financial Accounting** – as normal accounting books. It is designed for automated management and external reporting of accounts receivable, account payable, general ledger, consolidation, investment funds, cash and other sub-ledger accounts with a user defined chart of accounts. As entries are made relating to sales production and payments journal entries are automatically posed. This connection means that the “books” are designed to reflect the real situation.
2. **CO Controlling** – refers for internal cost management accounting. It stands for the companies' flow of cost and revenue. It includes profit centre, cost centre, product cost, project accounting, profitability analysis, etc.
3. **AM Asset Management** – designed to manage and supervise individual aspects of fixed assets which includes purchase and sale of assets, technology assets, depreciation and investment control management.
4. **SD Sales and Distribution** – controls the order lifecycle. It helps to optimize the activities and tasks which are carried out in delivery, billing and sales information system. In this part the key elements are marketing plan, request quotes, order management, transportation, invoices, shipments etc.
5. **MM Material Management** – related to anything to do with goods, it supports the inventory and procurement functions occurring in daily business operation such as purchasing, warehouse management, inventory management, reorder point processing, supplier evaluation, etc.
6. **PP Production Planning** – is used to control and make plans for the manufacturing activities of a company and manages the production process. Plant date, production planning, MRP and capacity planning, cost accounting are the main parts of this module. They includes; bills of

material, routings, work centres, sales and operation planning, material requirements planning, master production scheduling, shop floor control, production orders, product costing, etc.

7. **QM Quality Management** – is a quality control and information system supporting quality planning, quality inspection, quality control and quality documentation for manufacturing and procurement.
8. **PM Plant Maintenance** – maintenance and testing program, document processing, historical data, reports and analysis; these tasks affect the production plans. In a complex manufacturing process maintenance means a lot. Equipment must be serviced and rebuilt.
9. **HR Human Resource** – means people management, it is a complete integrated system for supporting the planning and control of personnel activities, such as, payroll, travel, working hours, recruitments, development plans, and personnel costs.
10. **PS Project System** – is made for supporting the planning, controlling and monitoring of long-term and highly complex projects with defined goals. This module includes; project plan, budget, capacity planning, resource management, result analysis, etc. It is a standard tool for project management.
11. **PI Process Integration** – is the module which integrates sap with other systems.
12. **WF Workflow** – includes working definition, process management, e-mail, messaging and automation. This module links the integrated SAP application modules with cross-application technologies, tools and services.
13. **IS Industry Solutions** – offers special applications for different industries. It combines the SAP application modules and additional industry-specific functionality. There are some special techniques have been developed for nowadays industries, such as, banking, pharmaceutical, oil and gas, etc.
14. **BW Business Information Warehouse** – is the data warehouse of SAP. It provides data warehousing functionality, a business intelligence platform, and a suite of business intelligence tools that enable businesses to attain these goals.

The last three modules 12-14 are included by **CA Cross-Application**. CA enhances these three individual modules. Each of these modules may have their own sub-modules, and they are designed for specific tasks. (Lawlor W. 2004)

3.4 What SAP can be used for

In general, SAP is used for Enterprise Solutions. Its uses certain system wide features; they are used to organize the data flexibly logically and safely in a business enterprise. SAP ERP supports a wide range of business processes. By using SAP ERP, the enterprises could enhance their financial management and reporting; they can link their business operations tightly and improve visibility.

3.4.1 Business Intelligence

SAP Business Objects (Business Objects was a French enterprise company, it was bought by SAP AG in 2007.) is one of the business intelligence solutions which provide all-around business intelligence functions. It gives users the ability to develop effective and informed decisions based on solid data and analysis results. From high-end analyst to ordinary business person, all users can access the information which they need, as far as possible not to rely on IT resources and developers.

3.4.2 Customer Relationship Management

SAP can also be used in Customer Relationship Management; it is not only able to help you solve the current problems such as reduce costs and improve decision making capacity, but also able to help your company to achieve differentiation in order to obtain long-term competitive advantage. Besides that, SAP CRM is the only complete, customer-centric e-commerce solutions. This solution is designed to provide customers with dedicated service. It helps the company to improve the competitive advantage, leads to higher profits

3.4.3 Enterprise Information Management

This is also one important function of SAP Business Objects. It provides comprehensive information management capabilities; contribute to delivery integrated enterprise data accurate and in time. Both structured data and unstructured data are included. These powerful solutions help user to deal with business transactions, critical business intelligence, data warehousing, data migration and master data management plan of action to provide truthful data.

3.4.4 Enterprise Performance Management

Another important point is so called Enterprise Performance Management. In order to help business to change to a performance driver type, solutions which could link the process and data are needed. This could provide a common view of the business. The Enterprise Performance Management solutions are helping to play the value of corporate data. The enterprises

could become more flexible and competitive by improving the coordination, insight and confidence.

3.4.5 Enterprise Resource Planning

This is one of the five packages of SAP Business Suite, it also occupies the market's most powerful core package. It provides a very good basic platform for enterprises. It helps enterprises to participate in the necessary competitions to win the global market. The basic functions of SAP ERP application software are supporting enterprise business processes and their operational efficiency, and specifically for industry-specific need of the enterprise.

3.4.6 Management and Compliance

SAP GRC (Governance, Risk, and Compliance) solutions are the gap between close strategy of governance, risk management and compliance solutions and execution. It was established in order to achieve a preventive across heterogeneous environment, real-time GRC a clear path to long-term value.

3.4.7 Human Resource Management

This module of SAP supports throughout the recruitment, deployment, potential development, motivation and ultimately leaving the process of valuable employees. It helps the enterprises to improve through these processes. SAP HR provides you complete, enterprise-wide functions.

3.4.8 Manufacturing

SAP manufacturing is powerful software that integrates with your business to other manufacturing. It is the only production and management of a comprehensive solution. Large manufacturing companies have many complexes which must be addressed interdependence. It promotes lower costs, besides that it improves quality and ability to respond. Companies can use SAP's discrete and process industries and manufacturing software to improve their processes.

3.4.9 Mobile Business Solution

What is more, with SAP's mobile business solutions, business can maximize the return on IT investment and take advantage of the solutions which have been implemented already. SAP's mobile business solutions can be seamlessly integrated with SAP business Suite. It solves the entire support program by the SAP Net Weaver platform, and support for mobile devices commonly used in connected or disconnected mode.

3.4.10 Product Lifecycle Management

SAP Product Lifecycle Management is one of the core packages; it has throughout the entire product and asset lifecycle collaborative engineering, custom development, project management, financial management, quality management and other functions. It has an orientation to entirely new concepts, technologies and methods, so that the entire product life cycle is so under controlling.

3.4.11 Service and Asset Management

SAP Service and Asset Management can help companies manage end-to-end service operations, in order to offer you better or more profitable products in development, marketing, sales and deliver. This solution provides the software to support the key service management processes.

3.4.12 Supply Chain Management

SAP Supply Chain Management is a part of the SAP Business Suite. This package is modular software; it can be used in conjunction with both other SAP and non-SAP software. It enables the organization to complete the basic business processes in a unique way. All areas of organizations and departments can dispose or arrange SAP Business Suite software, according to their own schedule, with the purpose of addressing specific business challenges, and without the need for costly upgrades.

3.4.13 Supplier Relationship Management

SAP Supplier Relationship Management is also a part of SAP Business Suite business applications. This integrated suite automates goods and services from procurement to payment process. It expanded the value of SAP Business Suite. If you would take view of SAP Business Maps, you would have a solid understanding of the value-added which SAP SRM can do for your company.

In all sustainable development requires companies to rethink their approach, whether it is the strategic adjustment of plans or sustainable development already in place. Besides that they also need to consider the risk and the opportunities of a new set of overall health problems which related to social-economy, environment and safety. SAP can easily achieve a new level of enterprise excellence from the sustainable development strategy for the overall management of enterprises.

4 PARTNERSHIPS WITH EDUCATIONAL INSTITUTIONS

In 1988 SAP started to establish partnerships with educational institutions around the world. The initial partnerships were with educational institutions in Germany, but in 1995 SAP rolled out the SAP University Alliances Program (SAP UAP) in the America. The first university member in the Americas was California State University, Chico (CSU, Chico). CSU, Chico began the partnership with SAP in 1995 and became the founding member of the SAP UAP in 1996. Since that time the SAP UAP has grown to more than 1000 educational institutions around the world and more than 200 in North America at this time (2011). Currently more than 250,000 students around the world have access to SAP system through the SAP University Alliances. (SAP AG 2011)

4.1 SAP University Alliances

The SAP University Alliance program is a global education effort that offers university qualification members with all the resources to teach their students about technology which can enable integrated business processes. The knowledge and skills obtained through this training provide added value to student attempting to enter a very competitive job force.

4.2 The necessity to give lectures in universities.

The author has been reading many documents and information about the importance for students of having knowledge and capability of using SAP. As follow, according to the study on salary conducted by Dr. Frank Andera, Director and Professor SAP University Alliance Program, Central Michigan University students who took SAP R/3-supported classes received starting salaries as high as \$10,000 more than those without SAP training. (Andera, F.A., Dittmer, A., & Soave, K. 2008)

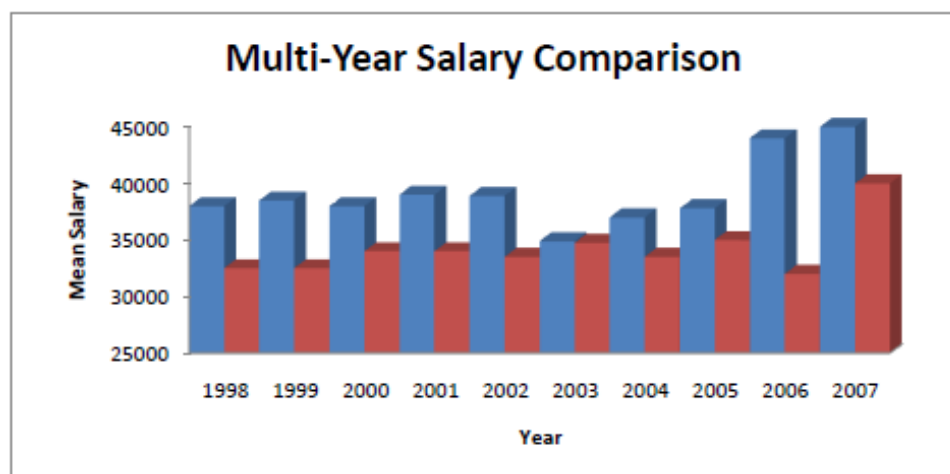


FIGURE 4 *Salary Comparison of Business Graduates: SAP vs. Non-SAP 1998-2007*

Figure 4 shows Dr. Andera's study. As above, blue represent SAP graduates and red represents non-SAP graduates. It shows that starting salaries for SAP graduates consistently remaining more than the non-SAP graduates for all ten years, 1998-2007. The greatest differential (\$11,000) between SAP and non-SAP graduates was in the year 2006. In addition, there is a fall in price from 2002-2003, as everybody knows that was because of the economy crises. Another thing the author would like to point out is the big price drop from 2005 to 2006 refers to the non-SAP graduates. There for, the author could not find any resources to interpret this. (Andera, F.A., Dittmer, A., & Soave, K. 2008)

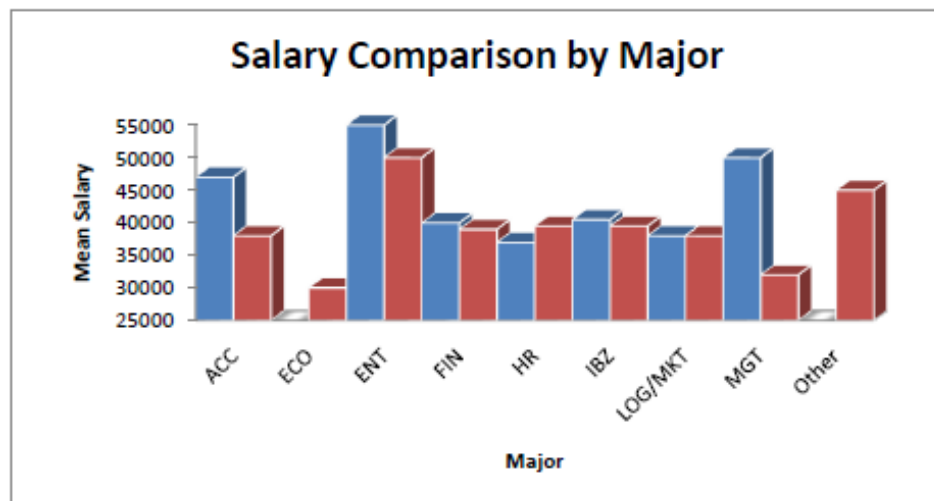


FIGURE 5 *Salary Comparisons of Business Graduates by majors: SAP vs. Non-SAP 2006-2007*

In addition, Dr. Andera provided a similar comparison of business graduates from College by their major. This study represented of the year 2006-2007 graduates who reported their starting salaries; the majority of individuals graduating with SAP experience got higher starting salaries than their class mates who don't have this experience. From Figure 5, we could read the biggest differences (\$16,717) between SAP and non-SAP graduates with in a major were the management major. It displays the average starting salary for the SAP management major was \$50,250, and for the non-SAP management major, the average starting salary was \$33,533. The Management Information Systems major did not record a non-SAP average salary as these students all had SAP experience. (Andera, F.A., Dittmer, A., & Soave, K. 2008)

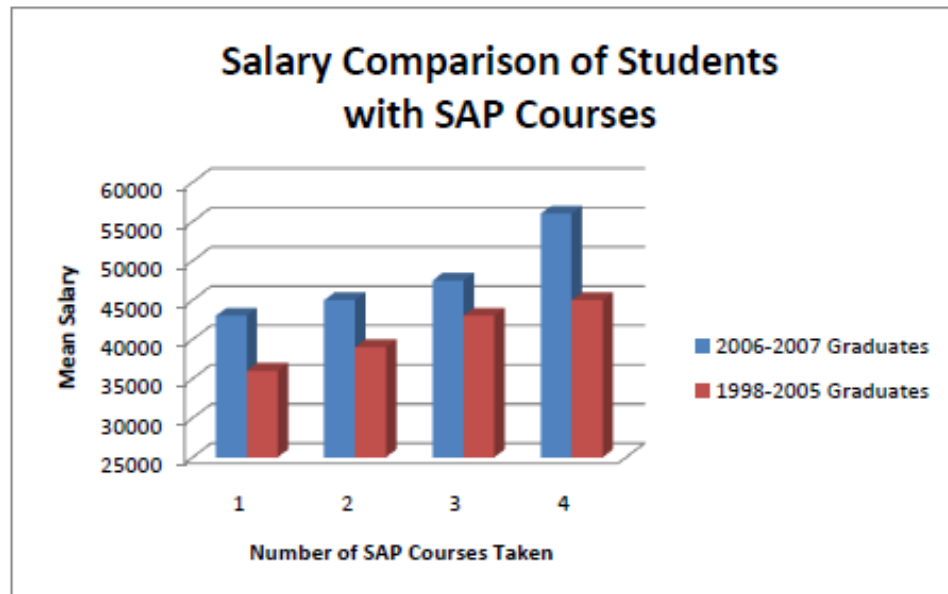


FIGURE 6 *Salary Comparison of Graduates by Number of SAP Supported Classes*

In Figure 6, further results show that as students take additional SAP course, their average starting salary increases. Graduates who have taken one Sap class could have \$37,214 as an average starting salary. For two classes taken the average salary was \$39,827, for three classes taken the average salary was \$43,498, and at the end for four classes taken the average salary was \$48,800. Some individual salary reports of students since this study are even between 15 - 20% higher. (Andera, F.A., Dittmer, A., & Soave, K. 2008)

To sum up, it is necessary to give a lecture in universities. This act provides students with a better understanding of the business process, how nowadays business works within and across functional areas. It would also improve students' skills under the high-demand market. Further more companies aware the demand and value the education of the students who has SAP knowledge by paying higher salaries compare to non-SAP graduates.

5 COURSE DESIGN AND DEVELOPMENT

What do course design and development really mean? From the Oxford advanced learner's dictionary, it is not difficult to find few explanations of both Design and Development.

Design: the general arrangement of the different parts of something that is made, such as a building, book and machine; the art or process of deciding how something will look and work; a drawing or plan from which something may be made; an arrangement of lines and shapes as a decoration; to make, plan or intention something for a particular purpose or use. [4]

Development: the gradual growth of something so that it becomes more advanced, stronger, etc.; the process of producing or creating something new or more advanced – a new or advanced product; a new event or stage that is likely to affect what happens in a continuing situation; a piece of land with new buildings on it; or the process of using an area of land especially to make a profit by building on it, etc.. (Wehmeire S. & Ashby M. 2000)

5.1 ISD – Instructional Systems Development

Nevertheless, course design and development are the phases of instructional systems development (ISD). Instructional System Development is also called instructional design; it is used to creating “instructional experiences which make the acquisition of knowledge and skill more efficient, effective and appealing.”(Merrill, M. D., Drake, L., Lacy, M. J., & ID2 Research Group 1996) The course director should outline the main features of the course and makes the content of the course clear by increasing the level of detail. “The process consists broadly of determining the current state and needs of the learner, defining the end goal of instruction, and creating some ‘intervention’ to assist in the transition. Ideally the process is informed by pedagogically (process of teaching) and andragogically (adult learning) tested theories of learning and may take place in student-only, teacher-led or community-based settings.” (Instructional Design 2012)

5.2 ADDIE Model

The most common model used for creating instructional materials is the ADDIE Model. Actually there are many instructional design models, however, quite many of them are based on the ADDIE Model which has five phases – analysis, design, development, implementation and evaluation. For example, *The Dick and Carey Systems Approach Model*, is also another well-know instructional design model; it was published in 1978 by Walter Dick and Lou Carey in their book entitled *The Systematic Design of Instruction* originally; the other instructional design model is

called *Instructional Development Learning Systems*; IDIS was published in 1970 by Peter J. Esseff, PhD and Mary Sullivan Esseff, PhD in their book entitled *IDIS-Pro Trainer 1: How to Design, Develop, and Validate Instructional Materials*. (Instructional Design 2012)

Here, the author will give a briefly introduction of ADDIE Model because of her opinion as it was mentioned above ADDIE is the base of many other models. It is a basic model that hold true for any type of learning. It is very simple thus includes all the components which found in all other instructional design models. Underside, according to the source from website the author created a chart to show this model. (ADDIE Model for Instructional Design 2012)

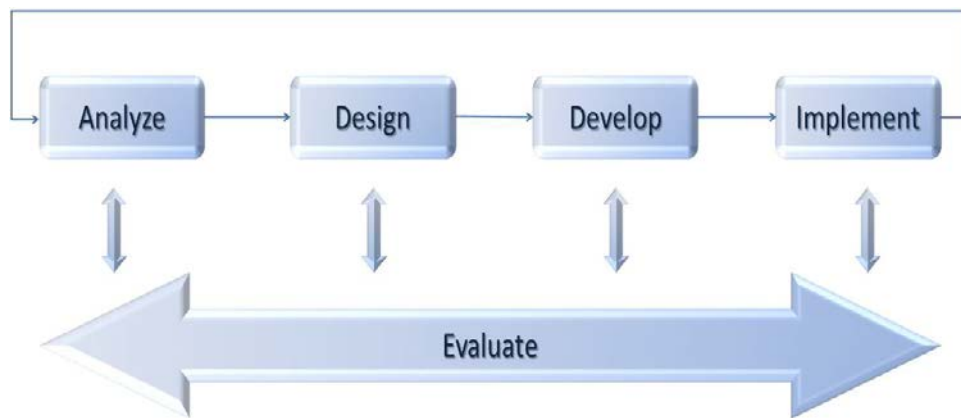


FIGURE 7 ADDIE Model of Instructional System Design

- i. Analyze
 - 1. Determine overall goals
 - 2. Assess learning needs
 - 3. Identify target audience
 - 4. Determine delivery environment
- ii. Design
 - 1. Identify learning objectives
 - 2. Develop assessment instruments (pre-tests, post-tests, evaluations)
 - 3. Create practice exercises
 - 4. Outline content and instructional strategies to match learning objectives
- iii. Development
 - 1. Create all assets for the educational programme or activity (lecture slides, graphics, charts, audio, video...)

2. Make sure all content can be easily accessed
- iv. Implementation
 1. Deliver or distribute the educational program or activity to the intended audience
 3. If necessary, create and implement a plan for learner support
- v. Evaluation
 1. Ensure that the intended learning goals or objectives are being considered all the way through the instructional design process
 2. Assess whether or not the learning needs have been met
 3. Assess the overall effectiveness of the educational program or activity
 4. Document changes in critical practise behaviour and/or patient outcomes

6 INTERVIEWS

6.1 An interview with Professor Joachim Buch from Hochschule Ludwigshafen

On 2nd April 2012, there was an interview hold with Prof. Dr. Joachim Buch from Hochschule Ludwigshafen in Germany. The purpose to have this interview is to find out why they design the course like what they have and benchmarking.

Prof. Dr. Joachim Buch is a professor for “Controlling and Information Management” study programme in Hochschule Ludwigshafen since 1999. He worked in Group Controlling department for Rütgerswerke AG in Frankfurt from 1988 to 1994. Between 1994 and 1998, he was a Group Controller in Lahmeyer International GmbH, Frankfurt; here is necessary to tell that SAP was not in use in this company. (Buch, interview 2.4.2012)

In 1999 there was a SAP course already established in Hochschule Ludwigshafen. It deals with basic functions in FI (accounts payable, accounts receivable, impersonal accounts, FI-entries, purchase order, sales order, master data in CO and accounting for service). (Buch, interview 2.4.2012)

Since 2004 they have had a basic course in SAP/ERP (12 lessons with 90 minutes) which deals with the above mentioned functions. They have combined this course with a course which deals with Microsoft-Excel and a course which deals with Business Warehouse (SAP-BW) in the module “Information systems” (3rd semester). In the 4th semester there is the course “SAP/ERP for Cost Accounting and Controlling” which deals with calculation and production of a product and introduction to customizing (advanced course). The author has attended this course. This course is combined with “Cost Management” and a course which deals with corporate planning (named “Integrierte Erfolgs- und Finanzplanung” in the module “Controlling”). They have done this because of the interdependencies between “Cost Accounting” and “Cost Management” and the SAP-course. (Buch, interview 2.4.2012)

Graduates from “Controlling and Management Information” in Hochschule Ludwigshafen will be mainly work in the fields of Accounting, Cost Accounting or Controlling. Most of the bigger companies are running SAP/ERP and the graduates must have knowledge about this software. He says that the approach of most ERP-systems in Accounting is similar. So SAP/ERP is an example to teach how ERP-systems generally work. (Buch, interview 2.4.2012)

The author asked him about the evaluation of the demand of the courses as well. Prof. Dr. Buch represents that in vacancies knowledge in SAP/ERP is claimed. The students have to do a traineeship in the sixth semester; and their feedback shows the need. However, as he knows, there is no

benchmark that shows the success of the course. (Buch, interview 2.4.2012)

In Hochschule Ludwigshafen, the basic course of SAP is told by Prof. Dr. Uwe Hanning; advanced course is told by him - Prof. Dr. Joachim Buch. The basic course is mandatory, and the advanced course is optional. Nevertheless, nearly all students choose the module “Controlling”. The workload of the basic course is 3cr/90h; for the advanced course is 4cr/120h. (Buch, interview 2.4.2012)

A SAP certification was pointed out by the author during the interview. There by, Prof. Dr. Buch made a clear breast that the students are not going to receive any kind of SAP certificated issued by SAP but a certificate from the University that they have attended and passed this course which includes the content of the courses. Of course he thinks that companies are valuing students’ SAP knowledge. (Buch, interview 2.4.2012)

Come next, the development of the courses has been asked by the author. The answer was that both courses will persist, and they have reorganized the modules already. In future there will be a module “Information Systems 1” (basic course SAP/ERP and Microsoft-Excel) and a module “Information Systems 2” (advanced course SAP/ERP and SAP BW). In this part, Prof. Buch told that in Germany normally takes a long time to change a curriculum, because it has to be authorized by the education ministry in Germany. (Buch, interview 2.4.2012)

At the end of the interview, he told about the questionnaire for the students they have which they could evaluate the course, exams, assignments etc; consequently to improve the quality of their education. He is sure that their students valuate the complexity of the course is high. (Buch, interview 2.4.2012)

6.2 Interviews of schoolmates

On the next day 3rd of April 2012, the author interviewed two double degree students who studied both in HAMK University of Applied Science and Hochschule Ludwigshafen. To get feedback from them, thus share different opinions and experience.

6.2.1 Interview with Larissa Sousa

Larissa Sousa is a 3rd year student of International Business from HAMK. She comes from Mozambique, and her major is international business. At this moment she is in the second semester of her double degree study period in Hochschule Ludwigshafen Germany.

She had an SAP course in HAMK, but only the basics as well as ERP systems. Now she just finished another follow up course of SAP in Germany which improved her skills in SAP and ERP systems. She

mentioned that there were more details and specific examples of usage of the software in Hochschule Ludwigshafen. (Sousa, interview 3.4.2012)

The SAP course is already a part of the curriculum in HAMK, thus it belongs to optional studies. The reason why she took it was because of gaining new knowledge and improving skill in it. During the interview, it was mentioned that in HAMK, students basically did a lot of very basic exercises with instructions; while in Hochschule Ludwigshafen students have most of the time individual exercises and practical work alone. Larissa Sousa told that it is benchmarking her past knowledge into practical life. She thinks that after both places she was able to gain theoretical knowledge in HAMK mostly and in Hochschule more practical. Now it is a bit clearer for her how the whole SAP system could be used in business. (Sousa, interview 3.4.2012)

The exercises from some companies in Hochschule Ludwigshafen were something interesting for her. Nevertheless, the theoretical part from HAMK helped her to apply that into a practical or a real business side. The work load is not so high from both Universities. Students had enough time always; and they were told to remember to save and update the data by using the tertiary real time system during the practices in Hochschule Ludwigshafen. (Sousa, interview 3.4.2012)

After these, the author asked if Larissa Sousa feels that her SAP knowledge would help her to find her first job better. Here she does not know yet, but she hopes so. Whereas she guesses this always depends on the company if they have or use SAP and in her opinion if so then of course it helps a great deal. Now she understands business processes better after studying, but not only from SAP course. (Sousa, interview 3.4.2012)

At the end of the interview, Larissa Sousa recommends other schools to offer SAP course. She thinks it is a good initiative and nowadays it is very common that companies use these soft wares to ease the network within the company. It is always good to already have some knowledge of one of these systems such as SAP R/3 before getting into work life, because then we automatically have a plus or advantage compared to other candidates. (Sousa, interview 3.4.2012)

6.2.2 Interview with Yuxuan Zhan

Yuxuan Zhan is a student from International Business 2008, she is from China. In July 2011 she finished her courses in Controlling and Information Management in Hochschule Ludwigshafen. She did not know anything about SAP before, and now she aware of basic information about SAP system including history, structure and functions; moreover IDES, basic operation in module FI, CO, PP, LO and case study of them. (Zhan, interview 3.4.2012)

Zhan mentioned the same thing as Larissa Sousa, comparing what they have learned from both HAMK and Hochschule Ludwigshafen. On

thewhole, HAMK are offering theoretical oriented basic courses of SAP/ERP; yet Hochschule Ludwigshafen offers practical oriented basics and advanced courses of SAP. She felt her knowledge both theoretical and practical increased. Before she did not know anything about SAP/ERP, and now she received a certificate from Hochschule Ludwigshafen that she has completed such courses with course guidelines and structure. However, from her own assessment, she thinks her knowledge of SAP is still insufficient for working. The courses she had merely helped her to understand what SAP is, and learnt a few transactions. She pointed out that in work life, without understanding of the actual business process, those skills are less useful. Here the author would like to show approval. (Zhan, interview 3.4.2012)

During the studies, both universities have cases simulating real business transactions. The work load was ok for Zhan. There was a case study as warming-up before the course really started, and that took her one week to complete. It was a good point, the students had to get information and knowledge somehow, in order to understand and complete the case study. Then further would be easier for them to follow the courses. In Germany, there were several tests during the courses; failing one of them will lead a fail in the course. There are also case studies, as well as theoretical lectures. As every other course, final exam was also hold by the end of the semester of the study. In Finland, practical part divided into different courses; such as Logistics and Supply Chain Management. (Zhan, interview 3.4.2012)

Definitely Zhan has a better understanding of business process. SAP has a set of standard business process. However, there are still some transactions in SAP that she does not understand. She thinks maybe because she has not much working experience yet. (Zhan, interview 3.4.2012)

By closing the interview, Zhan gave her statement that SAP is a significant tool in nowadays enterprises. Top 500 companies mostly use SAP to do ERP. Familiar with SAP is definitely a plus in job applications. However, SAP system is very complicated. To teach students SAP requires systematic approaches, and many study hours. In addition SAP is not only ERP system that a company can use; there are also substitutes. In China, many companies, especially SMEs (Small and Medium Enterprises) choose other ERP systems instead of SAP, because SAP is too expensive and complicated. (Zhan, interview 3.4.2012)

6.3 E-mail interviews with Lecturers from IB Programme HAMK, Finland

As we have courses that include ERP/SAP as part of the course already for two year, (Supply Chain Management, HRM, Financial Accounting and Management Accounting) it is necessary to hear what the lectures say. Very important feedback could improve the module design efficient. The author conducted e-mail interviews with Lecture Dawn Aarnio and Annaleena Kolehmainen from IB Programme of HAMK University of Applied Science in Finland.

6.3.1 E-mail Interview with Lecturer Dawn Aarnio from HAMK

Dawn Aarnio is a lecturer in International Business Programme. She has courses which include Finance topics, Management topics and she plays also tutor teaching role. (Aarnio, e-mail 5.4.2012)

Why HAMK wanted to offer SAP course? Her answer was that in order to prepare the students for working directly after graduation. And this refers to the content above. Besides this, information is that HAMK is offering SAP to one degree or another, which included in Financial Accounting, Supply Chain Management, Management Accounting, and Strategic Management Accounting; and yet not taught by her. However, she has worked with SAP in her previous job. Dawn Aarnio mentioned as well that she is not aware if there is a benchmark that proves whether students achieve a better job with SAP knowledge. (Aarnio, e-mail 5.4.2012)

There is an introduction course for 1st year students for 3cr in IB Programme in HAMK, and moreover is the integration into courses. Now there is not Lecturer from IB who would hold the course, they would have someone from another unit and this would be outsourced. In her opinion SAP has an automatic relationship with business studies at all the levels, and the focus would be having more contact lessons with SAP than at present. It was mentioned in this email interview that one module in Valkeakoski is 15cr, and they do not want to see a module totally of SAP, but integration into courses. (Aarnio, e-mail 5.4.2012)

Students now in HAMK are only need to participate the exercises at this moment. (Aarnio, e-mail 5.4.2012)

6.3.2 Email Interview with Lecture Annaleena Kolehmainen

Annaleena Kolehmainen, Finnish, 42 years old, LLM (Master of Law) and Master of Arts, started in HAMK for current position autumn 2010, main competence areas Legislation, HRM, Leadership and Entrepreneurship. (Kolehmainen, e-mail 4.4.2012)

In the same question Annaleena Kolehmainen thinks like Dawn Aarnio that the reason they want to offer SAP courses in HAMK is because SAP is required by companies that employ the students. She said that basic courses and integrated part are offering at this moment e.g. to HRM courses. However, she thinks it went not very well, and they are lacking competent teachers in the area. She is also not so familiar with SAP. (Kolehmainen, e-mail 4.4.2012)

She wrote that according to her colleagues, she sees that there is a benchmark that proves students to achieve a better job with SAP

knowledge. About the content what should be taught to the students, she thinks basic things and deeper knowledge related with the subject. Integrating SAP and ERP into existing courses and having a separate basic course is a good idea. But definitely integrated courses have to relate well to the subject. Somehow by having teachers who are familiar with practical implementations is the basic way that they can ensure the knowledge transfer. (Kolehmainen, e-mail 4.4.2012)

Generally she expects students understanding the opportunities of SAP and being familiar with it. It is not necessary to go far to the point of getting a certificate issued by SAP. Anyway, she thinks at the end of the study, students would notice the benefit of the course in working life. (Kolehmainen, e-mail 4.4.2012)

7 INCORPORATION INTO IB PROGRAMME

After the theory and the research part, the author is going to analysis the demand of International Business of HAMK, and the possibilities of implementation of SAP courses. Afterwards she will give a brief teaching programme as her recommendation referring to the study programme of international business in HAMK University of Applied Science, benchmarked with Hochschule Ludwigshafen.

7.1 Demand and Possibilities of HAMK to Implement SAP courses

It is not difficult to find out that the demand of IB of HAMK is to incorporate SAP learning into the existing curriculum for all taught lessons, on the basis of the interviews with two Lectures from HAMK.

In accordance with the interview with Prof. Dr. Buch, the large amount of modules SAP software provides, lacking competent teachers in the area and the limitations of this thesis; the author decided to deliver a best practice approach for only two modules SAP FI and SAP CO. It would refer to the demand of the school to incorporate SAP learning into the existing curriculum. The reasons lay in the justification to deliver an approach that fits the major study “International Management”. Also, the business process (Business Process Management is going to be explained in 7.4) focused approach to incorporate e.g. HRM, SCM, MM and other possible combination are understood as practicable to follow the SAP FI and SAP CO approach.

Following the author will describe the existing IB Programme of HAMK University of Applied Science and how above mentioned SAP modules can be incorporated into the curriculum based on the ADDIE course design module.

7.2 Bachelor of IB Programme in HAMK

The author is a student of Bachelor of International Business in HAMK University of Applied Science since 2005 August. Until today, she studied three years international business in HAMK, and her work placement was also done there as assistance for international affairs and work placement coordinator. In addition, Erasmus and a double degree programme continued in Germany.

7.2.1 History of HAMK

HAMK University of Applied Science is a higher education institution authorised by the Finnish government. HAMK is maintained by the Häme

Uncial Federation of Professional Higher Education (HAKKY). It is formed by six member municipalities (Forssa, Hattula, Hämeenlinna, Riihimäki, Tammeela and Valkeakoski). The history can be traced back to the 18th Century. “As early as 1885, Finnish female pedagogue Frerika Wetterhoff (1844 – 1905) established a school of sewing and weaving bearing her name, Wetterhoff. Shortly after the establishment of Wetterhoff, teaching education, both for primary schools and vocational schools, began in Hämeenlinna and has continued until the present time”. (History of Education of Hämeenlinna 2011) The professional Teacher Education Unit was established in 1959, joined HAMK University of Applied Sciences in 1996, they have 90 employees; educates approximately 1000 professionals every year. Besides this, they educate approximately 2000 professionals yearly through continuing education. (Professional Teacher Education Unit in Brief 2011)

7.2.2 IB Programme in Valkeakosi, HAMK

HAMK is a multidisciplinary university of applied sciences which has around 8000 students. It has 29 bachelor-level degree programmes and 7 master-level degree programmes. The units of HAMK are located in seven places with in a 100 kilo meter area of range. Each units specialise in different areas, such as namely culture; natural resources and environment; social sciences, business and administration; natural sciences; social services, health and sport; communication and transport; vocational teacher education. (HAMK University of Applied Sciences 2011) In Valkeakoski, there is a degree programme in Automation Technology, and the international programmes Automation Engineering, Industrial Management and International Business.

There into International Business, it provides education leading to the Bachelor of Business Administration (BBA) degree. This study programme prepares students for their careers of professional expertise where the competence areas are managerial processes in international business field and marketing on global markets. To continuing the subject, it is necessary to have a look of the curriculum if this study programme. (International Business Programme 2011)

7.2.3 The curriculum of degree programme of IB of 2011

HAMK Valkeakoski University of Applied Sciences		Degree Programme in International Business																Cr.	
BBIBN11A7 (3.12.2010/HT) updated 21.6.2011/lk		CURRICULUM																	
		2011 - 2012 1. class				2012 - 2013 2. class				2013 - 2014 3. class				2014 - 2015 4. class					
		1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4		
COMMON BASIC STUDIES 30		17	16	16,5	16,5	66	19	19	20,5	19,5	15	24	24	24,5	23,5	150	0	0	0
00110004 Languages and Communication																			
00110117 Yhteisöviestintä (3.00 / -)		1,5	1,5															3	
00110118 Asiantuntijaviestintä (3.00 / -)																			3
00110212 Ruotsi (3.00 / -)																			3
00110329 Working English (3.00 / -)		1,5	1,5					1,5	1,5										3
00110330 Professional English (3.00 / -)																			3
00110130 Daily Finnish (4.00 / -)		2	2																4
00110131 Studying Finnish (5.00/-)					2,5	2,5													5
00120006 Professional Growth																			
00120023 Learning skills (3.00 / -)		1,5	0,5	0,5	0,5														3
00120104 Professional Skills (3.00 / -)								1	1	1									3
00120304 Research and Development Skills (3.00 / -)														2	1				3
00120404 Computer skills (3.00 / -)		1,5	1,5																3
00120604 Entrepreneurial activities (3.00 / -)								1,5	1,5										3
30000005 Field -of-Study-Specific Studies																			
30002081 Safety at Work (3.00 / -)										1,5	1,5								3
30003000 Methods 9																			
30057631 Data Processing (3.00/-)		1,5	1,5																3
30057632 Introduction to ERP Systems (3.00/-)				1,5	1,5														3
30055633 Mathematics (3.00/-)		1,5	1,5																3
30003001 Business Concepts 9																			
30057634 Marketing (3.00/-)		1,5	1,5																3
30057635 Financial Accounting (3.00/-)				1,5	1,5														3
30057636 Business Functions (3.00/-)		1,5	1,5																3
30003002 International Business Environment 9																			
30057679 Business Environment (6.00/-)		3	3																6
30057638 Business Law (3.00/-)				1,5	1,5														3
PROFESSIONAL STUDIES, COMPULSORY 30																			
30057628 Working Finnish (6.00/-)								1,5	1,5	1,5	1,5								6
30057600 International Marketing 15																			
30057639 Business Statistics (3.00/-)				1,5	1,5														3
30057640 Marketing Research and Planning 4				2	2														4
30057641 Marketing Communication 5				2,5	2,5														4
30057642 Marketing Project 3				1,5	1,5														4
30057604 International Operations 15																			
30057643 Export Management and Internationalization 3								1,5	1,5										3
30057644 Management Accounting 3								1,5	1,5										3
30057645 Organisational Behaviour 3								1,5	1,5										3
30057646 Cross Cultural Communication 3								1,5	1,5										3
30057647 Operations Project 3									1,5	1,5									3

Implementing SAP Courses into the International Business Programme

MAJOR SUBJECT 45																	
30057405 International Management 45																	
30057662 Strategic Management 15																	5
30057648 Strategic Management Accounting 5																	5
30057649 Strategy Implementation 5																	5
30057650 Strategic Tools 5																	5
30057663 HRM and Organizational Development 15																	5
30057651 Human Resource Management and ERP 5																	5
30057652 Change Management 5																	5
30057653 Organizational Development 5																	5
30057664 Industrial Services 15 Compulsory																	3
30057654 Project Management 3																	3
30057655 Supply Chain Management 3																	4
30057656 Industrial Service Business 4																	5
30057657 International Management Project 5																	5
30057321 Global Marketing 45																	
30057665 Marketing Management 15																	5
30057667 Sales and Marketing Management 5																	5
30057331 Customer Relationship Marketing 5																	5
30057670 Digital Marketing 5																	5
30057406 Doing Business in Europe 15																	5
30057671 European Markets 5																	5
30057672 Doing Business with the Finns 5																	5
30057673 Market Entry Project 5																	5
30057664 Industrial Services 15 Compulsory																	3
30057654 Project Management 3																	3
30057655 Supply Chain Management 3																	4
30057656 Industrial Service Business 4																	5
30057674 Global Marketing Project 5																	5
30057679 Global Marketing 45																	
30057665 Marketing Management 15																	5
30057667 Sales and Marketing Management 5																	5
30057331 Customer Relationship Marketing 5																	5
30057670 Digital Marketing 5																	5
30057680 Doing Business with the Chinese 15																	4
30057325 Basics of the Chinese Markets (4,00 / -)																	3
INB33621 Chinese Business Cultures (3,00 / -)																	3
30057326 Market Entry to the Chinese Markets (3,00 / -)																	5
30057677 Market Entry to China Project 5																	5
30057664 Industrial Services 15 Compulsory																	3
30057654 Project Management 3																	3
30057655 Supply Chain Management 3																	4
30057656 Industrial Service Business 4																	5
30057674 Global Marketing Project 5																	5

Minor Subject 15																	
Available part of Major Subjects:																	
30057404 Strategic Management 15																	15
30057403 HRM and Organization Development 15																	15
30057402 Marketing Management 15																	15
30057407 Doing Business in Europe 15																	15
30057678 Doing Business with the Chinese 15																	15
30057628 Engineering Studies 15																	15
30057629 International Studies 15																	15
Optionals Studies 15																	15
Work Placement 30																	
INB50003 Work Placement (15,00 / -)																	15
INB50004 Work Placement (15,00/-)																	15
Graduation Thesis 15																	0
INB60003 Graduation Thesis (15,00/-)																	15

17 16 16,5 16,5 0 19 19 20,5 19,5 15 24 24 24,5 23,5 150 10 5 420

The curriculum clearly showed that the development of professional competence is expressed in the study plan on an annual basis.

During the first academic year, students will have such courses: learning skills and information search as meta skills, basic business concepts includes economic thinking and marketing, social skills and team working skills are taught in organization behaviour, language and communication skills, knowledge of various cultures, customer-orientation, basics of accounting, besides all these, flexibility, openness, creativity, high degree of initiative, adaptability would also be learned step by step. (Curricula 2012)

During the second year, students' professional competence will improve by learning the development objects. They are in particular: entrepreneurship internal and external, a comprehensive knowledge of the international business and marketing, at the same time students would gain the ability of critical and analytical thinking, problem-solving and decision-making skills, economical thinking. Moreover, students would establish contracts to companies or organizations by conducting their work placement in this year. During this process, students would gain company related practical competence which required for the BBA degree. (Curricula 2012)

During the third year, the objectives are going further to achieve deep professional competence related to the major and minor subjects and optional studies. Students would have gained strong professional knowledge, ability and desire to develop their own professional competence. They would also have the ability to acquire information and utilize it both from theoretical and practical sides. Their profession of managerial and leadership skills would also get some development. (Curricula 2012)

The last step to complete the study is the graduation thesis project for the fourth year. It has to be a company-related project work, and this study would deepen their competences gained during the earlier studies, developing their skills in expertise of International Management and/or Global Marketing. (Curricula 2012)

It was very well and professionally designed. Many things were taken into consideration to have a great system of international business study. However, we could change something to make it better, to make it reach a higher level learning, to make it keep up with the times. (Curricula 2012)

7.3 Analyzing of the Curriculum

Going through the curriculum from 2011 of IB Programme of HAMK, it is not difficult to find out there are two major studies – International Management and Global Marketing. Students are going to have different focus on their profession start in the third academic year of their studies.

7.3.1 Major Subject – 30057405 International Management

30057662	Strategic Management 15
30057648	Strategic Management Accounting 5
30057649	Strategy Implementation 5
30067650	Strategic Tools 5
30057663	HRM and Organizational Development 15
30057651	Human Resource Management and ERP 5
30057652	Change Management 5
30057653	Organizational Development 5
30057664	Industrial Services 15 Compulsory
30057654	Project Management 3
30057655	Supply Chain Management 3
30057656	Industrial Service Business 4
30057657	International Management Project 5

TABLE 1 Curriculum of International Management Major Study

TABLE 1 notes SAP/ERP learning already operated in Human Resource Management course at least. Above the two schoolmates also mentioned that some exercises are also implemented in other courses such as Supply Chain Management.

7.3.2 Major Subject – 30057321/30057679 Global Marketing

For students who choose Global Marketing as their major, HAMK offers two different modules of their professional study period.

➤ 30057321 Global Marketing 45

30057665	Marketing Management 15
30057667	Sales and Marketing Management 5
30057331	Customer Relationship Marketing 5
30057670	Digital Marketing 5
30057406	Doing Business in Europe 15
30057671	European Markets 5
30057672	Doing Business with the Finns 5
30057673	Market Entry Project 5
30057664	Industrial Services 15 Compulsory
30057654	Project Management 3
30057655	Supply Chain Management 3
30057656	Industrial Service Business 4
30057674	Global Marketing Project 5

TABLE 2 30057321 Global Marketing 45

➤ **30057679 Global Marketing 45**

30057665	Marketing Management 15
30057667	Sales and Marketing Management 5
30057331	Customer Relationship Marketing 5
30057670	Digital Marketing 5
30057680	Doing Business with the Chinese 15
30057325	Basics of the Chinese Markets 5
INB33621	Chinese Business Cultures 3
30057326	Market Entry to the Chinese Markets 3
30057677	Market Entry to China Project 5
30057664	Industrial Services 15 Compulsory
30057654	Project Management 3
30057655	Supply Chain Management 3
30057656	Industrial Service Business 4
30057674	Global Marketing Project 5

TABLE 3 30057679 Global Marketing 45

TABLE 2 and TABLE 3 formulate two options for students who choose Marketing as their major. Two different modules “Doing Business in Europe” and “Doing Business with the Chinese” presents up-to-date education. This also refers to the name “Global” Marketing, it is practical and realistic.

7.4 An Introduction of Business Process Management Module Implementation

The amount of courses which IB Programme offers is large. It of course includes almost all the parts which a business graduates should know. However, it is necessary to challenge students to a higher level of learning to face the pluralism of nowadays business, especially in the Management field. We can call the higher level of learning ‘active learning’. There is a necessity of this learning type where the students are much more involved in what they are doing in their future daily business.

At the beginning we talked about that in nowadays businesses the cross-functional interactions, teamwork, value chains, business processes, workflow management and supply chains are tightly connected with each other. All of these are making students to put their attention not only to a specific functional area or a narrow subject. Instead, they must have an understanding of how that functional area relates to each other and relates to the rest of the business. This is even more important for graduates who take Management as their major then whom take Marketing as the major study.

An understanding of the events and relationships that take place in a business is required in order to understand a system like SAP. As it was

just mentioned it is not enough just to know the sales, production, finance and accounting have jobs to do in a business. We must understand the details of each action, plus the timing of those actions and the internal relationships with every process. Certainly there might be no person who has a complete grasp of the situation in proximate operations. “Before an operation can be automated or computerized a thorough study of the business must be undertaken. This task is called Business Process Engineering.” (Management Information Systems 2008)

To look at the big map, all together refers to so called business process. This is also how the author came up with the name of “Business Process Management” of the SAP module. This module design is based on the curriculum of International Business, thus combines the business process management contents with a practical SAP subject. It should be a module for International Management subject disciplines.

7.4.1 BPM - Business Process Management

What is business Management? There are as many answers as there are vendors, analysts, researchers, commentators, customers and academics. Anyway, we must adapt to the changing requirements of the environment in which it operates to survive and prosper our business. Today’s most intelligent and resilient businesses are those who do not take anything for granted and regularly restructure and adapt themselves to changing business conditions. This process refers to Business Process Management. And the purpose of it is to improve the outputs or benefits of business processes.

From John Jeston and Johan Nelis’s point of view, “BPM does not equate to a technology tool or initiative for business processes.” (Jeston J. & Nelis J. 2008) They suggested that BPM is “*The achievement of an organization’s objectives through the improvement, management and control of essential business processes.*” (Jeston J. & Nelis J. 2008) In their opinion, “there is significant business process improvement that can be achieved without technology.” (Jeston J. & Nelis J. 2008) However, many people ask “Can BPM involve technology, and is technology a good thing?” (Jeston J. & Nelis J. 2008) Certainly, when it is in the right circumstances and can be justified also. A further question would be “Are process-modelling and management tools useful for achieving process improvements in non-technology circumstances?” The answer is “If the tools referred to are process-modelling tools, then yes, they can be extremely useful in this process. In fact, it is difficult to complete complex process improvement projects in a time-effective manner without the use of these tools.” (Jeston J. & Nelis J. 2008)

Traditionally, four big parts are taken into a business process. They are sales, production, purchasing, and Finance/Accounting. (Management Information Systems 2008)

SALES	<ul style="list-style-type: none"> ➤ Pre-sales activity – planning and availability support for the sales personnel ➤ Sales order – the actual entry of the sales order into the system done by the salesperson at the point of sales perhaps using PCs and Internet connections ➤ Determining where the most efficient source of the ordered product is in inventory and shipping it ➤ Delivery ➤ Customer Billing & Customer Payment
PRODUCTION	<ul style="list-style-type: none"> ➤ Sales and operations planning SOP where the sales forecasts are used in a production planning model to check feasibility ➤ Master Production Scheduling MPS- the actual plan for the whole production process ➤ Material Requirements Planning MRP – where the production plan is actually converted into raw materials input requirements ➤ Planned Order – when materials are available and capacity exists this plan is created and then converted into a ➤ Production Order ➤ Shop Floor Control - where the actual production takes place and is registered into the system as finished goods
PURCHASING	<ul style="list-style-type: none"> ➤ Requisition – once the production manager plans to manufacture something, a requisition for the raw materials required but not on hand must be prepared ➤ Vendor Selection – made by the purchasing department ➤ Purchase order sent ➤ Goods receipt increasing inventory ➤ Invoice verification as it is received from vendor ➤ Payment to vendor
FINANCE & ACCOUNTING	<ul style="list-style-type: none"> ➤ Sales events must be captured at the proper time into the ledger system ➤ Inventory must be adjusted to match goods shipped ➤ Inventory must be adjusted to match raw materials received ➤ Inventory must be adjusted to move value from raw materials to work in process ➤ Inventory must be adjusted to increase finished goods when they are produced ➤ Accounts payable must be set up for purchases ➤ Accounts receivable must reflect goods billed but not yet paid for

TABLE 4 *Sequential Business Process [2]*

Business Process Engineering must not only identify all these steps are mentioned in TABLE 4, but also find the most significant way to minimize redundant activities. For instance, “when sales are made, inventory and manufacturing plans should be automatically updated; when manufacturing plans are updated raw materials should be automatically ordered from vendors; when finished goods are shipped customers should be automatically billed at the same instant”. (Management Information Systems 2008) This literary explanation is easy to understand and seems simplicity in action; however, real situations are much more complex than the simple explanation above.

“Process management is an integrated part of ‘normal’ management. It is important for leadership and management to recognize that there is no finish line for the improvement of business processes; it is a programme that must be continually maintained.” (Jeston J. & Nelis J. 2008) Business Process Management is not outnumbering just software. It is an integral part of Management. Besides improving or reengineering the processes, it deals with the managerial issues as well. Normally people talk about modelling of it; however, it includes also the implementation and execution of these processes. (Jeston J. & Nelis J. 2008)

7.4.2 Content of BPM Module

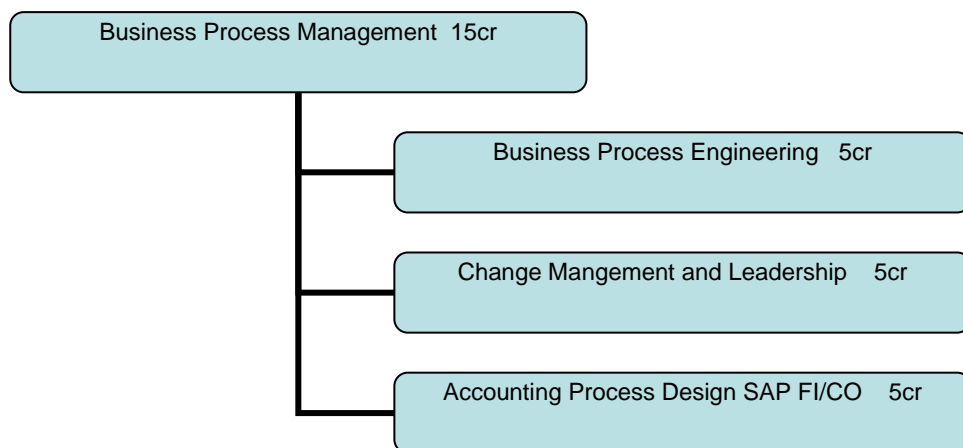


FIGURE 8 *Structure of Business Process Management Module*

➤ **Business Process Engineering**

The aims of this course are to have active training in business systems; and processes modelling, optimisation and innovation in real organization. (Integrated Study Information System 2006)

The contents of this course could include Business Processes; Business process and system modelling; Business optimization and innovation; Information system development and Reengineering of an enterprise. (Integrated Study Information System 2006)

The learning outcomes and competences are to complete the course, so students should be able to understand why it is important to manage an organization in a process-oriented manner; why it is important to model business processes; collaborate on managing an organization in a process-oriented manner as well; know how to model business processes in the organization and understand how the public administration works in enterprises. (Integrated Study Information System 2006)

➤ **Change Management and Leadership**

The aims of this course are to provide knowledge and understanding of the important role of Leadership and Change Management; and group discussions, case studies and a simulation exercises will be held to evaluate Skills of Change Management and Leadership.

The contents of this course include conceptual overview of Change Management; the challenges of changes; the impact of changes on communication and leadership strategies; change processes in transitional societies; methodologies supporting Change Management and applying the models in practices.

“This course provides a unique opportunity to become more familiar with options to address the real operational challenges of the security-development debate.” (Short course/CPD 2012)

➤ **Accounting Process Design SAP FI/CO**

The aims of this course are to put theory into practice; by way of practice to get in-depth knowhow of Financial Accounting and Management Accounting and by teaching the process perspective of business processes, students are enabled to understand and learn the processes that apply in “real-time” in companies. In a word, students’ theoretical knowledge is deepened through the combination of theory and a practicable approach.

The contents of this course includes the most relevant knowledge on Finance, such as organization structures, general ledger, accounts payable, accounts receivable and fixed assets. Besides, from a controlling (company internal accounting) perspective, cost centre accounting, overhead management, internal order accounting, product cost planning, product cost controlling, profitability analysis, business profitability reporting using the tools of profitability analysis recording and reporting could be taken into consideration. Consequently an introduction of SAP FI/CO would be taught at the beginning period.

SAP FI/CO data interacts with several other SAP modules, such as Human Resource Management, Production Planning, Sales and Distribution, Material Management, Plant Maintenance. After this course students should be able to have a better understanding of how business process works in daily working life.

7.4.3 The reason to choose SAP FI/CO

SAP FI - Financial Accounting is an important core module in real-life-time business. It is designed to record financial transactions in a manner consistent with external reporting. As it was mentioned above, SAP FI is integrated with many other modules of SAP that enable companies to unify processes. Those Modules, such as HR, CO, PP, SD, MM, commonly find a role of integration with FI. (SAP FI/CO 2008)

The following figure shows a typical business process associated with the SAP FI Module: (SAP Financial Accounting 2011)

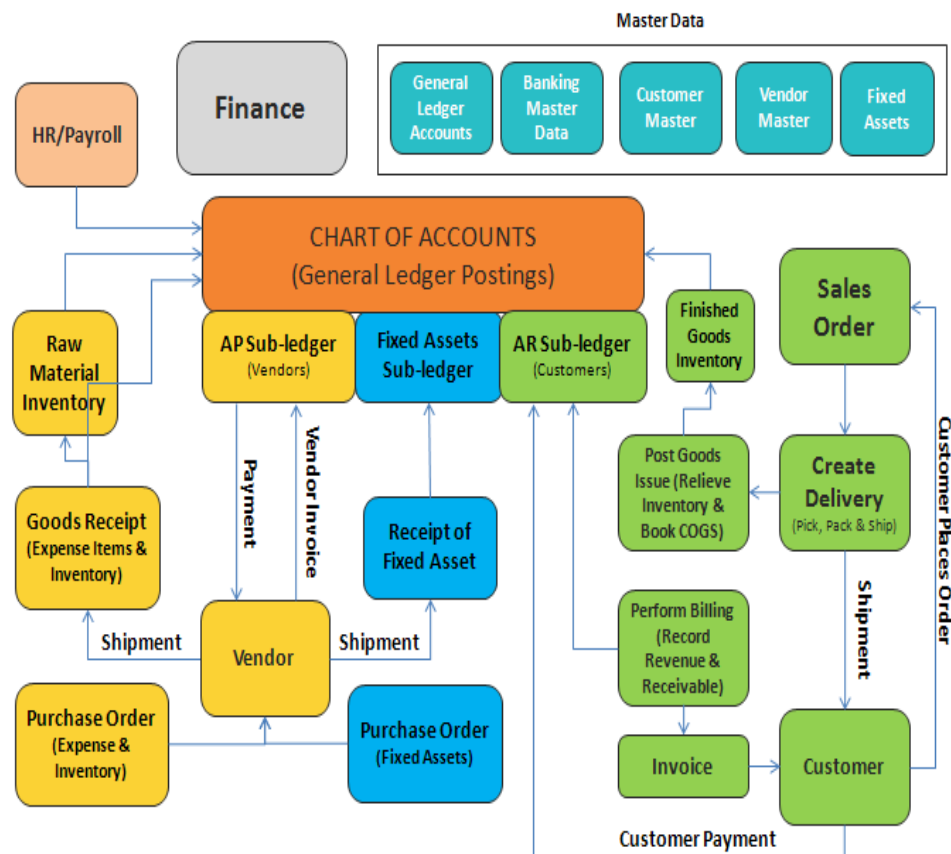


FIGURE 9 Business Process Associated with the SAP FI Module (SAP Financial Accounting 2011)

SAP CO – Controlling is the term that refers to Management Accounting. It helps management by providing reports on the cost centre; profit centres contribution margins; etc. SAP CO focuses on internal users, in contrast to

SAP FI which focuses on external reporting. “The transactions posted in FI are transferred to CO for cost accounting processing, analytical reporting, and audit-controlling spectrums.” (SAP FI/CO 2008) SAP CO is integrated with FI-AA, SD, PP and HR. While FI is the main source for data for CO, the others such as SD and PP have much integration with CO; thus revenue postings in FI will result in posting in CO. “The HR Module also generates various types of costs to CO. In addition, planned HR costs can be passed on to CO as well for CO planning purposes.” (SAP FI/CO 2008)

A Business Process Associated with the SAP CO Module: (SAP Financial Accounting 2011)

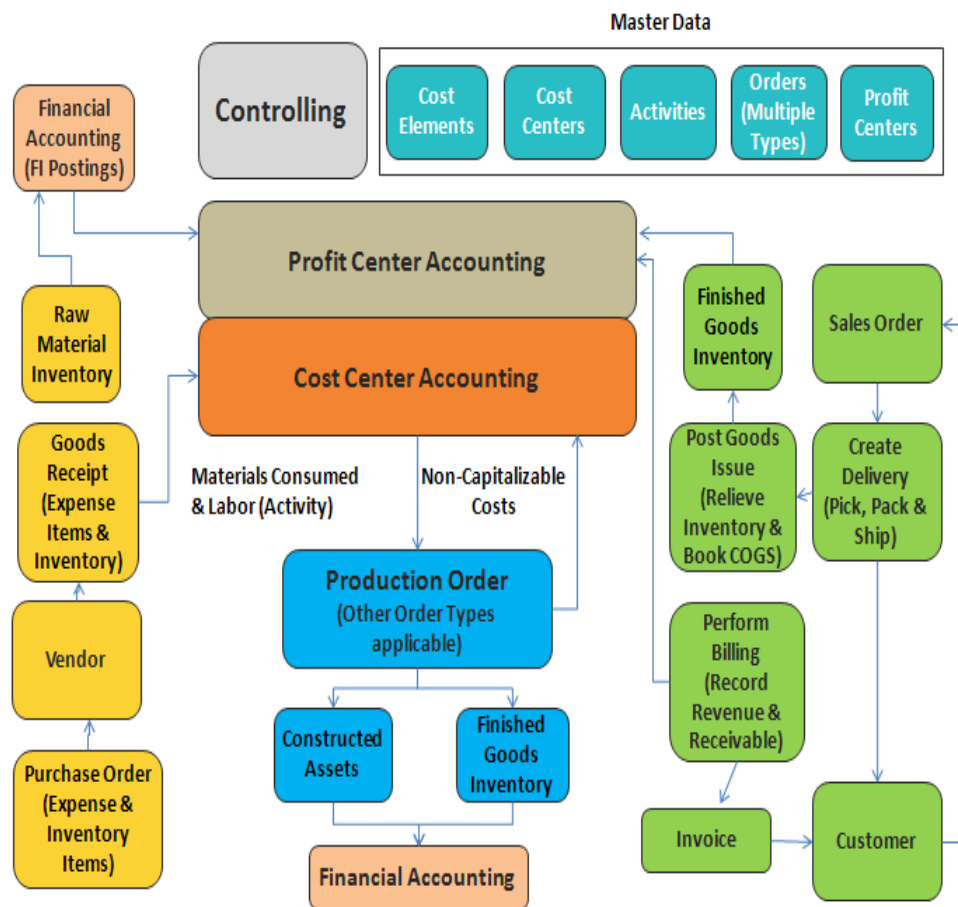


FIGURE 10 Business Process Associated with the SAP CO Module (SAP Financial Accounting 2011)

Apparently SAP FI and SAP CO are accounting processes related. SAP FI corresponds to Financial Accounting and SAP CO corresponds to Management Accounting; additionally FI is the main data source for CO. They are combined known as the most popular modules SAP FI/CO.

Based on the curriculum of IB programme in HAMK in Valkeakoski, “Accounting Process Design SAP FI/CO” would be an advanced

accounting course after Financial Accounting and Management Accounting courses in the first two years of study in HAMK.

7.5 Implementation of BPM Module

Considering the ideal goal of HAMK the author is going to raise two new proposals compared to the current curriculum of IB programme of HAMK.

7.5.1 Recommendation 1 - Optional Study

In consideration of administration processes of changing a curriculum and the ideal goal of HAMK, the author has such recommendation which would be represented underside.

Adding “Accounting Process Design SAP FI/CO” as an optional study course for 5cr into the curriculum is the only change for the whole implementation process. Because the “Introduction of ERP Systems”, “Financial Accounting” and “Management Accounting” already exist; “Accounting Process Design SAP FI/CO” would be the advanced accounting process course which puts the basic knowledge into practice by operating SAP software.

In this case, there would not be any changes of the courses which IB programme of HAMK has currently. About the mentioned integration of SAP and ERP into existing courses, specialized SAP lectures are needed. Just right this is the heart of the matter. Complementary, to integrate many SAP modules into a Bachelor Program of International Business maybe is divorced from reality.

This outline is not a study module but only one course; it could be a preliminary plan for the next year.

7.5.2 Recommendation 2 - Major Study

The long term planning is to develop the current curriculum gradually. The author made a new plan for the curriculum:

➤ COMMON BASIC STUDIES 30

Current	Proposition
0011004 Languages and Communication	0011004 Languages and Communication
00120006 Professional Growth	00120006 Professional Growth
30000005 Field-of-Study-Specific Studies	30000005 Field-of-Study-Specific Studies
30003000 Methods 9	30003000 Methods 9
30003001 Business Concepts 9	30003001 Business Concepts and Environment 18 (30003001+30003002)
30057634 Marketing (3,00/-)	30057634 Marketing (3,00/-)
30057635 Financial Accounting (3,00/-)	30057635 Accounting (Financial and Management) (4,00/-) (30057635+30057644)
30057636 Business Functions (3,00/-)	30057636 Business Functions (3,00/-)
30003002 International Business Environment 9	30057638 Business Law (3,00/-)
30057679 Business Environment (6,00/-)	30057679 Business Environment (5,00/-)
30057638 Business Law (3,00/-)	

TABLE 5 *Current and Proposition curriculum of Common Basic Studies Analytic Comparison*

The author adds “Management Accounting” from the professional studies into in the common basic studies named a course “Accounting” which includes both “Financial Accounting” and “Management Accounting”. The reason why she did like this was mentioned above that “Financial Accounting” and “Management Accounting” are related with each other, this is a foundation of the advanced courses in the major study field. Also, to make sure that there are no more or less credits for all the courses in total, some compression is needed.

➤ **PROFESSIONAL STUDIES, COMPULSORY 30**

Current	Proposition
30057628 Working Finnish (6,00/-)	30057628 Working Finnish (6,00/-)
30057600 International Marketing 15	30057600 International Marketing 15
30057639 Business Statistics (3,00/-)	30057639 Business Statistics (3,00/-)
30057640 Marketing Research and Planning 4	30057640 Marketing Research and Planning 4
30057641 Marketing Communication 5	30057641 Marketing Communication 5
30057642 Marketing Project 3	30057642 Marketing Project 3
30057604 International Operations 15	30057604 International Operations 15
30057643 Export Management and Internationalization(3,00/-)	30057643 Export Management and Operating (Projects) (4,00/-) (30057643+30057647)
30057644 Management Accounting (3,00/-)	30057645 Organizational Behaviour and Development(5,00/-) (30057645+30057653)
30057645 Organizational Behaviour (3,00/-)	30057646 Cross Cultural Communication 3
30057646 Cross Cultural Communication 3	30057647 Human Resource Management (3,00/-) (30057651)
30057647 Operations Project 3	

TABLE 6 *Current and Proposition curriculum of Professional Studies Analytic Comparison*

In the Professional Study part, the changes are only coordinated with the module International Operations. To get a better corresponding with the module International Marketing which has four courses for 15cr, the author shorted five courses into four courses in the International Operations Module; and keep as it is for 15cr.

“Export Management and Operating (Projects)” for 4cr is a compression of “Export Management and Internationalization” for 3cr and “Operations Project” for 3cr. Here the author thinks that it is possible to combine a theory course and a project work into one study course. Not difficult to find the same idea she had, was to put “Organizational Behaviour” for 3cr

and “Organizational Development” for 3cr together as “Organizational Behaviour and Development” for 5cr.

The “Human Resource Management” course is a major course only for the management students in the current curriculum of IB programme in HAMK. However, the author is aware of something different that even the marketing student should also have knowledge of Human Resource. In any career field people would be promoted to a higher level, every graduate is aware of being a leader. Therefore, basic Human Resource Management knowledge is required for every business graduates.

➤ **MAJOR SUBJECT 45 – 30057405 International Management 15**

Current	Proposition
30057662 Strategic Management 15	30057662 Strategic Management 15
30057663 HRM and Organizational Development 15	30057663 Business Process Management 15
30057651 Human Resource Management and ERP 5	30057651 Business Process Engineering 5
30057652 Change Management 5	30057652 Change Management and Leadership 5
30057653 Organizational Development 5	30057653 Accounting Process Design SAP FI/CO
30057664 Industrial Services 15 Compulsory	30057664 Industrial Services 15 Compulsory

TABLE 7 *Current and Proposition curriculum of Major Subject of International Managements Analytic Comparison*

The new module implementation plays in the major study area for International Management. In total there are 45 credits, they are divided into three study modules – Strategic Management; HRM and Organizational Development; and Industrial Services. Most people who studied business or who know about business studies know that Strategic Management and Industrial Services are two important parts in nowadays business study curriculums. There is no change for these two modules. Obviously two courses from the module HRM and Organizational Development are moved to previously studies as part of the professional study for every student in IB programme, but not only for management students.

To benchmark with the study and research of this thesis, the author designed a new module “Business Process Management” to fill in here to complete the implementation of SAP courses into the IB Programme of HAMK. As original, there are three courses under this module. “Business Process Engineering” as a theory part of Business Process Management;

“Change Management and Leadership” describes the change processes in an organization and the impact of changes on communication and leadership strategies; “Accounting Process Design SAP FI/CO” as a new up-to-dated business process practice course based on the accounting course in the first year study.

8 CONCLUSION

This study was commissioned by HAMK University of Applied Science, International Business Programme in Valkeakoski, Finland. IB programme of HAMK has already started introduction course of ERP systems, and some basic integrations. Since the importance of learning ERP systems, especially SAP, is getting greater, they decided to develop their curriculum to adapt to the current market demands. The purpose of the study was to implement SAP courses into IB programme, includes what topics, elements, modules and inter-system processes should be used to support the theory.

Based on both desk and field research, the author found two solutions for IB programme of HAMK by interviewing different target groups – Professor (who has been a SAP professor for 14 years) in Germany, two schoolmates and lectures from HAMK in Valkeakoski. The conceptual design of the “Business Process Management” Module was the author’s intention when she evaluated several ideas. The significant difference between these two solutions is the integration of the new module, alongside with necessary amendments in terms of learning content and credit points for existing modules and their courses.

The circumstance of the current situation of HAMK is that they want SAP courses integrated into the IB Programme but they have a lack of teachers for it.

However, in order to make what they want happen, HAMK has to hire either professional SAP educational personnel or get a teacher from HAMK certified to be allowed to teach SAP business processes. In addition, they need to define the content for the courses.

To close this study, the author would like to give such recommendations below:

First of all, HAMK should analyze the exact skill gap that a course must be designed for in reference to the ADDIE course design model. At the mean time HAMK need to find SAP lectures. Hiring qualified SAP education personnel or have somebody get certified for SAP process teaching is a core issue which need to be taken into consider. Secondly, HAMK should decide which other courses it is necessary to teach SAP process learning for. For example, Supply Chain Management and Human Resource Management could be the courses integrated with SAP practice. Nevertheless, the author highly recommends HAMK follow the best practice approach for SAP FI/CO which the author described in this study.

The last, keep the evaluation running permanently and adapt the content and the way of teaching adequately to the circumstances. Develop the curriculum to challenge students to higher level of learning to face the pluralism of nowadays business shows IB Programme of HAMK keeps pace with the times.

SOURCES (LIST OF REFERENCE)

Aarnio D. & Kolehmainen A. 2012. Lecturers. HAMK University of Applied Science. Email Interview 1st April 2012.

ADDIE Model for Instructional Design. Accessed 25th March 2012. <http://www.docstoc.com/docs/50272717/ADDIE-Model-for-Instructional-Design>

AMR Research Inc., July 8, 1998. Electronic Buyer's News 25-45.

Andera, F.A., Dittmer, A., & Soave, K. 2008. Salary Comparison of SAP vs. Non-SAP Business Graduates. Issues in Information Systems 607-613.

Bancroft Nancy H., Seip H. & Sprengel A. 1998. Implementing SAP R/3 – How to introduce a large system into a large organization. 2nd edition. Greenwich.

Bradford, M., Vijayaraman, B. S. & Chandra, A. 2003. The Status of ERP Integration of Business School Curricula: Results of a Survey of Business School, Communications of the Association for Information Systems, 12:437 - 456.

Buch J. 2011. Prof. Dr. Hochschule Ludwigshafen Germany. Interview 2nd April 2012.

Copy Right: Rai University, Management Information Systems, Tutorial on ERP Packages and Soft wares, pdf-file. Accessed 26th. September 2011. <http://pdfcast.org/pdf/management-information-systems-a-short-sap-tutorial>

Corbitt G. and Mensching J., Department of Management Information Systems, California State University, Chico, CA 98926, USA; Information Technology and Management 1 (2000) 247-258; Integrating SAP R/3 into a College of Business curriculum: Lessons learned, pdf-file. Accessed 11th January 2012. <http://dbpub.cnki.net/grid2008/dbpub/Detail.aspx?DBName=SSJD&FileName=SSJD00002213404&QueryID=3&CurRec=4>

Curricula: Hämeen ammattikorkeakoulu. Accessed 27th March 2012. https://soleops.hamk.fi/opsnet/dispen/ops_KoulOhjSel/tab/tab/fet?ryhmt

yp=1&amk_id=1463505&lukuvuosi=&valkiel=fi&koulohj_id=1463572&ryhma_id=6472632

HAMK University of Applied Sciences. Accessed 22nd March 2012.
http://portal.hamk.fi/portal/page/portal/HAMK/In_English/About_HAMK/HAMKgeneral

History of Education of Hämeenlinna, Finland. Accessed 22nd March 2012.
http://portal.hamk.fi/portal/page/portal/HAMK/AOKK/English/facts_in_brief/history

Instructional Design. Accessed 24th March 2012.
http://en.wikipedia.org/wiki/Instructional_Systems_Design

Integrated Study Information System., pdf-file. Accessed 3rd April 2012.
<http://isis.vse.cz/katalog/syllabus.pl?predmet=82097>

International Business Programme. Accessed 22nd March 2012.
http://portal.hamk.fi/portal/page/portal/HAMK/In_English

Jeston J. & Nelis J. Foreword by Davenport T. 2008. Business Process Management/Practical Guidelines to Successful Implementations. 2nd edition. UK.

Lawlor W. 2004. Common SAP R/3 Functions Manual. UK.

McCann K. D. & Grey D., Central Michigan University. SAP/ERP Technology in a higher education curriculum and the university alliance program, pdf-file. Accessed 9th January 2012.
http://iacis.org/iis/2009/P2009_1325.pdf

Merrill, M. D., Drake, L., Lacy, M. J., & ID2_Research_Group, 1996. Reclaiming instructional design. Educational Technology. 36(5), 5-7.

Podlogar M., Procurement Laboratory, eCenter, Faculty of Organizational Sciences, University of Maribor, Slovenia; Josef Basl, Department of Information Technologies, University of Economics, Prague, Czech Republic, SAP ERP Case Study; pdf-file. Accessed 7th January 2012.
<http://organizacija.fov.uni-mb.si/index.php/organizacija/article/view/84>

Professional Teacher Education Unit in Brief. Accessed 22nd March 2012.
<http://portal.hamk.fi/portal/page/portal/HAMK/AOKK/English>

Roseman, M. 2004. The Integration of SAP Solutions in the Curricula – Outcomes of a Global Survey, white paper and submitted to the Journal of IS Education. Queensland University of Technology, Brisbane.

SAP AG, Partnerships with educational institutions, Business and Markets. Accessed 16th November 2011. http://en.wikipedia.org/wiki/SAP_AG

SAP FI/CO – A Brief Introduction & Outline, pdf-file. Accessed 4th April 2012. <http://www.comter.com/in/SAP%20FICO.pdf>

SAP Financial Accounting. Accessed 4th April 2012.
<http://www.erptips.com/Learn-SAP/SAP-Module-Overviews/Financial-Accounting.asp>

Short course / CPD. Accessed 3rd April 2012.
<http://www.cranfield.ac.uk/cds/shortcourses/changemanagementandleadership.html>

Sousa L. & Zhan Y. 2011. Double degree students from HAMK (studies in Germany). Interview 3rd April 2012.

Wehmeire S. & Ashby M. 2000. Oxford Advanced Learner's Dictionary of Current English. Sixth edition. Oxford New York.

COVER LETTER

TO PROF. DR. JOACHIM BUCH FROM HOCHSCHULE LUDWIGSHAFEN,
GERMANY

Dear Prof. Dr. Buch,

I am a double degree student from 2008 from HAMK University of Applied Science. To complete my study I am writing my thesis with a topic how to implement a SAP study module into the business curriculum, there for I would like to ask if I would give an interview with you to talk about the situation in Controlling and Information Management department in Hochschule Ludwigshafen. It would be very grateful if you can help me to do this. Following I will put the questionnaires.

- Would you please briefly introduce yourself? What is your profession, how long have you been dealing with SAP, when you started teaching in University in Germany, Hochschule Ludwigshafen? Are you also participating in any other projects or activities related to SAP/ERP systems?
- When did you see the necessity to offer the courses and why?
- How did you noticed the demand for the courses and when you started to offer SAP course, maybe also to talk about the development of the process?
- Why did you decide to offer the courses as you are and not other modules?
- How did you evaluate the course demand?
- Is there a benchmark that shows the success of the courses?
- Who are giving the lectures?
- Are the lectures mandatory or optional?
- How much does the workload contain of the semesters' total workload?
- Are students going to receive any kind of SAP certificate issued by SAP?
- Are companies valuing student's SAP knowledge?
- Are you going to keep as it is now or are you still willing to do some changes in future?
- How do you (academic perspective) evaluate the courses, exam, assignments, project etc?
- How do the students evaluate the complexity of the course?

Thank you for helping me to graduate!

Kind Regards,
Jing Xu

COVER LETTER
TO DOUBLE DEGREE SCHOOLMATES

Dear Mates,

I am now doing a research work for my final thesis. The topic is related to a design and implementation of a SAP study module for International Business in HAMK University of Applied Science. Because of that I would like to ask if I would give an interview with you to talk about your experience and opinions. It would be great to do this, you would help me to graduate and do a contribution for our home university. Here I attached the questions which we might talk about, please check them up. I am looking forward to do this! And it is very thankful of your contribution.

Kind Regards,
Jing Xu

ATTACHMENT

- Introduce your situation briefly, which study program you are studying and so on.
- What did you know about SAP before?
- What do they know now?
- How were you introduced into the course, both in HAMK and Hochschule Ludwigshafen? What have you learned from both sides?
- Do they feel that your knowledge both theoretical and practical increased?
- Was there a clear transfer from business theory into practice from both?
 - If yes, how was it made transparent and structured?
 - If no, what did you not learn?
- How high was the work load?
- How was the knowledge transfer ensured?
- Do you feel that your SAP knowledge helps to find the first job better?
- Do you understand business processed better now?
- Would you recommend other schools to offer SAP courses related to major studies or optional studies?

E-MAIL INTERVIEW

TO LECTURERS DAWN AARNIO AND ANNALEENA KOLEHMAINEN FROM HAMK

Dear Professor,

I am a student from IB programme in Valkeakoski, since 2008 I am doing a double degree in Hochschule Ludwigshafen. Recently, I am about to graduate after I finish my final thesis. The topic of my thesis is how to implement a SAP study module into IB program in HAMK University of Applied Science. To complete this study I need to get some information. It would be very helpful for me if you would answer some questions here in the attachment. Your answers would help me to complete the study of designing a new study module for the business study programme in HAMK.

I am looking forward to hearing from you!

Kind Regards,
Jing Xu

ATTACHMENT

- Please introduce your self briefly, for example, age, nationality, when you started being a professor for HAMK, what are you teaching now for international business etc.
- Why do you want to offer SAP courses at HAMK?
- What are you offering at this moment, how it is going?
- Have you made practical experience with SAP before?
- Is there a benchmark that proves students to achieve a better job with SAP knowledge?
- What do you want to teach the students?
- How much existing SAP knowledge to you expects the students to have to participate?
- How do you want to ensure knowledge transfer from theory into practice?
- Who is going to hold the course?
- How many modules do you want to offer courses for?
- What module do you want to offer courses for?
- How much must the courses relate to the major study plan?
- What are your expectations from a successful module including SAP training?
- Are students going to receive any kind of SAP certificate issued by SAP?
- How do you (academic perspective) evaluate the courses, exam, assignments, project etc?
- How do the students evaluate the complexity of the course?

- EXTRA, what is told in Financial Accounting and Management Accounting, the main content and what kind of SAP practices you are offering in the class?

APPENDIX 4

E-MAIL INTERVIEW ANSWER
FROM LECTURER DAWN AARNIO FROM HAMK

1. Please introduce your self briefly, for example, age, nationality, when you started being a professor for HAMK, what are you teaching now for international business etc. Dawn Aarnio, Lecturer in International Business Programme. Courses include Finance topics, Management topics and tutor-teacher role.
2. Why do you want to offer SAP courses at HAMK? In order to prepare the students for working directly after graduation.
3. What are you offering at this moment, how it is going? SAP is included (to one degree or another) in Financial Accounting, Supply Chain Management, Management Accounting, Strategic Management Accounting. NOT TAUGHT BY ME
4. Have you made practical experience with SAP before? Yes, I have worked with it in my previous job.
5. Is there a benchmark that proves students to achieve a better job with SAP knowledge? Not that I am aware of.
6. What do you want to teach the students?
7. How much existing SAP knowledge to you expects the students to have to participate? There is an introduction 3cr course for 1st year student.
8. How do you want to ensure knowledge transfer from theory into practice? More integration into courses.
9. Who is going to hold the course? Someone from another HAMK unit or it needs to be outsourced.
10. How many modules do you want to offer courses for? I am not sure what your definition of module is, but more course integration.
11. What module do you want to offer courses for? The same as listed above but more contact lesson than at present.
12. How much must the courses relate to the major study plan? SAP has an automatic relationship with business studies at all the levels.
13. What are your expectations from a successful module including SAP training? One module her in Valkeakoski is 15cr, I do not want to see a module totally of SAP, but integration into courses.
14. Are students going to receive any kind of SAP certificate issued by SAP? Not that I am aware of.
15. How do you (academic perspective) evaluate the courses, exam, assignments, project etc? participation only (at the moment)
16. How do the students evaluate the complexity of the course? No idea
17. EXTRA, what is told in Financial Accounting and Management Accounting, the main content and what kind of SAP practices you are offering in the class?

Not done by me, but by the SAP lecturer. Most companies have one type of ERP system or another.

APPENDIX 5

E-MAIL INTERVIEW ANSWER

FROM LECTURER ANNALEENA KOLEHMAINEN FROM HAMK

1. Please introduce your self briefly, for example, age, nationality, when you started being a professor for HAMK, what are you teaching now for international business etc.
A: Annaleena Kolehmainen, Finnish, 42, years old, LL.M and Master of Arts, started in HAMK for current position autumn 2010, main competence areas legislation, HRM, leadership and entrepreneurship.
2. Why do you want to offer SAP courses at HAMK?
A: Because SAP is required by companies that employ our students.
3. What are you offering at this moment, how it is going?
A: Basic courses and integrated part e.g. to HRM course. Not very well, we are lacking competent teachers in the area.
4. Have you made practical experience with SAP before?
A: I myself am not familiar with SAP, if that was the question.
5. Is there a benchmark that proves students to achieve a better job with SAP knowledge?
A: Yes, according to my colleagues.
6. What do you want to teach the students?
A: Basic things and deeper knowledge related with the subject e.g. HRM.
7. How much existing SAP knowledge to you expects the students to have to participate?
A: I don't understand the question.
8. How do you want to ensure knowledge transfer from theory into practice?
A: By having teachers who are familiar with practical implementations and by practical assignments.
9. Who is going to hold the course?
A: That has been a problem. At the moment I am having an outside expert from a large international company.
10. How many modules do you want to offer courses for?
A: I think that integrating SAP and ERP into existing courses and having a separate basic course is a good idea.
11. What module do you want to offer courses for?
A: Where ERP is needed e.g. HRM and ERP.
12. How much must the courses relate to the major study plan?
A: Integrated courses have to relate well to the subject in question.
13. What are your expectations from a successful module including SAP training?
A: For students understanding the opportunities of SAP and being familiar with it.
14. Are students going to receive any kind of SAP certificate issued by SAP?

A: Not as far I know.

15. How do you (academic perspective) evaluate the courses, exam, assignments, project etc?

A: Evaluation criteria are based on objectives of each course.

16. How do the students evaluate the complexity of the course?

A: at the end their notice the benefit of the course in working life.

17. EXTRA, what is told in Financial Accounting and Management Accounting, the main content and what kind of SAP practices you are offering in the class?

A: As I am not teaching the courses in question, I am not able to answer.